

SAMSUNG

DIGITAL VIDEO CAMCORDER

Chassis : Spider-X

BASIC : VP-X105L

Application Models

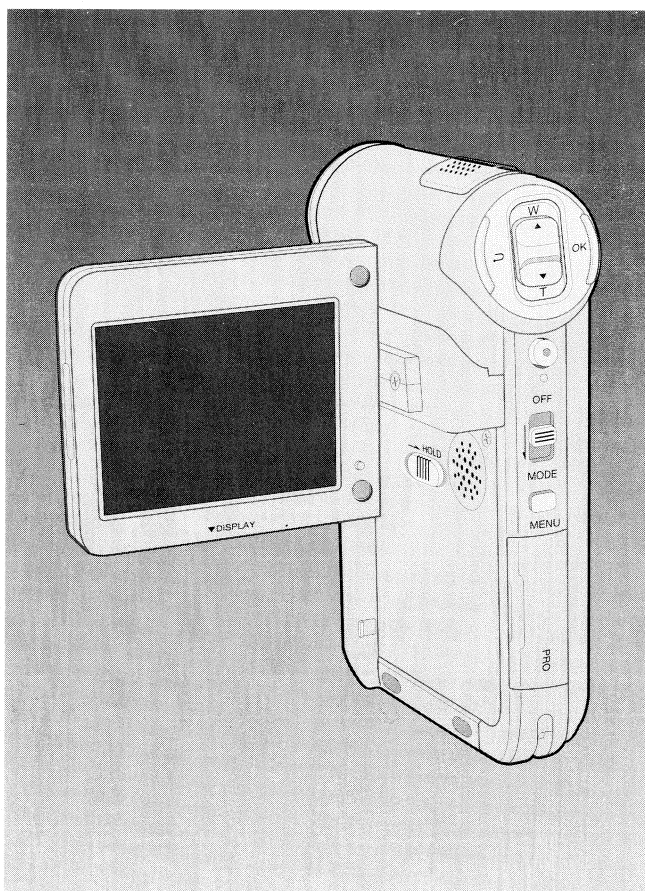
: VP-X105, X105L, X110, X110L

Application Area

**: XEF, XEU, XEG, XET, XEV, XEC, XSA, CDM,
XST, XEO, XEH, XEP, XEE, EAP, EUR, XEN,
HACO, TAW, TIT, COL, SEO, XSS, SED, XSH,
XSG, FES, XTL, CHN, ZAM, STS, SMR, XFA,
ITN, KNT, XSE, FPT, RAD, AFR, AND**

SERVICE Manual

DIGITAL VIDEO CAMCORDER



Merit & Character regarding Product

- ⌘ Integrated Digital CAM/DSC operation
- ⌘ High Resolution Image Quality (Digital Still Camera)
- ⌘ 100x Digital Zoom
- ⌘ Colorful TFT LCD
- ⌘ Electronic Image Stabilizer (EIS)
- ⌘ Various Digital Effects
- ⌘ USB Interface for Data Transfer
- ⌘ PC Cam for multi-entertaining
- ⌘ Plus Advantage, MP3
- ⌘ Voice Record / Playback with vast memory
- ⌘ Weatherproof (External Camera Module only)



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⌘ If you want to know additional information which is not included on this Service Manual, Please refer to the SKP (Samsung Knowledge Portal) web site.
URL ; <http://europe.samsungportal.com>

1. Precautions

1-1 Safety Precautions

1) Before returning an instrument to the customer, always make a safety check of the entire instrument, including, but not limited to, the following items:

(1) Be sure that no built-in protective devices are defective or have been defeated during servicing.
(1) Protective shields are provided to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience.
(2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fish papers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.

(2) Be sure that there are no cabinet openings through which adults or children might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, excessively wide cabinet ventilation slots, and an improperly fitted and/or incorrectly secured cabinet back cover.

(3) Leakage Current Hot Check-With the instrument completely reassembled, plug the AC line cord directly into a 230V(220V ~ 240V) AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1270 (40.7). With the instrument's AC switch first in the ON position and then in the OFF position, measure from a known earth ground (metal water pipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle brackets, metal cabinets, screwheads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis.

Any current measured must not exceed 0.5mA. Reverse the instrument power cord plug in the outlet and repeat the test. See Fig. 1-1.

Any measurements not within the limits specified herein indicate a potential shock hazard that must be eliminated before returning the instrument to the customer.

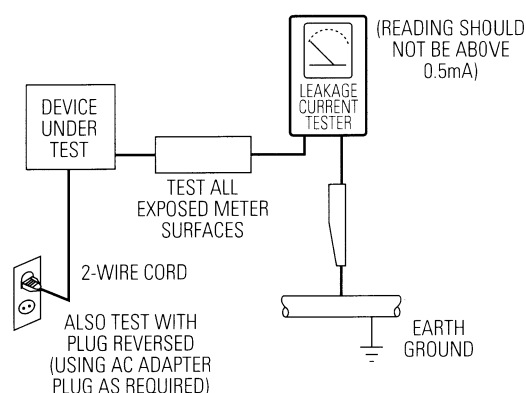


Fig. 1-1 AC Leakage Test

(4) Insulation Resistance Test Cold Check-(1) Unplug the power supply cord and connect a jumper wire between the two prongs of the plug. (2) Turn on the power switch of the instrument. (3) Measure the resistance with an ohmmeter between the jumpered AC plug and all exposed metallic cabinet parts on the instrument, such as screwheads, antenna, control shafts, handle brackets, etc. When an exposed metallic part has a return path to the chassis, the reading should be between 1 and 5.2 megohm. When there is no return path to the chassis, the reading must be infinite. If the reading is not within the limits specified, there is the possibility of a shock hazard, and the instrument must be repaired and rechecked before it is returned to the customer. See Fig. 1-2.

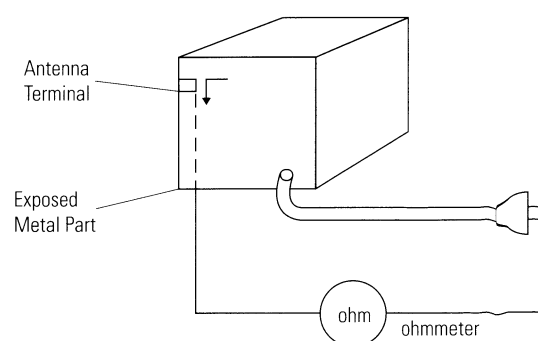


Fig. 1-2 Insulation Resistance Test

- 2) Read and comply with all caution and safety related notes on or inside the cabinet, or on the chassis.
- 3) Design Alteration Warning-Do not alter or add to the mechanical or electrical design of this instrument. Design alterations and additions, including but not limited to, circuit modifications and the addition of items such as auxiliary audio output connections, might alter the safety characteristics of this instrument and create a hazard to the user. Any design alterations or additions will make you, the servicer, responsible for personal injury or property damage resulting therefrom.
- 4) Observe original lead dress. Take extra care to assure correct lead dress in the following areas:
 - (1) near sharp edges, (2) near thermally hot parts (be sure that leads and components do not touch thermally hot parts), (3) the AC supply, (4) high voltage, and (5) antenna wiring. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between a component and the printed-circuit board. Check the AC power cord for damage.
- 5) Components, parts, and/or wiring that appear to have overheated or that are otherwise damaged should be replaced with components, parts and/ or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
- 6) Product Safety Notice-Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by shading, an () or a () on schematics and parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2 Servicing Precautions

CAUTION : Before servicing units covered by this service manual and its supplements, read and follow the Safety Precautions section of this manual.

Note : If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions. Remember: Safety First.

1-2-1 General Servicing Precautions

- (1) a. Always unplug the instrument's AC power cord from the AC power source before (1) re-moving or reinstalling any component, circuit board, module or any other instrument assembly, (2) disconnecting any instrument electrical plug or other electrical connection, (3) connecting a test substitute in parallel with an electrolytic capacitor in the instrument.
- b. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
- c. Do not apply AC power to this instrument and /or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
- d. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

Note : Refer to the Safety Precautions section ground lead last.

- (2) The service precautions are indicated or printed on the cabinet, chassis or components. When servicing, follow the printed or indicated service precautions and service materials.
- (3) The components used in the unit have a specified flame resistance and dielectric strength. When replacing components, use components which have the same ratings. Components identified by shading, by () or by () in the circuit diagram are important for safety or for the characteristics of the unit. Always replace them with the exact replacement components.

- (4) An insulation tube or tape is sometimes used and some components are raised above the printed wiring board for safety. The internal wiring is sometimes clamped to prevent contact with heating components. Install such elements as they were.

- (5) After servicing, always check that the removed screws, components, and wiring have been installed correctly and that the portion around the serviced part has not been damaged and so on. Further, check the insulation between the blades of the attachment plug and accessible conductive parts.

1-2-2 Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power ON. Connect the insulation resistance meter (500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts(see note) should be more than 1 Megohm.

Note : Accessible conductive parts include metal panels, input terminals, earphone jacks, etc.

1-3 ESD Precautions

Electrostatically Sensitive Devices (ESD)

Some semiconductor (solid state) devices can be damaged easily by static electricity.

Such components commonly are called Electrostatically Sensitive Devices(ESD). Examples of typical ESD devices are integrated circuits and some field-effect transistors and semiconductor chip components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

- (1) Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
- (2) After removing an electrical assembly equipped with ESD devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
- (3) Use only a grounded-tip soldering iron to solder or unsolder ESD devices.
- (4) Use only an anti-static solder removal devices. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESD devices.
- (5) Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESD devices.
- (6) Do not remove a replacement ESD device from its protective package until immediately before you are ready to install it.(Most replacement ESD devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive materials).
- (7) Immediately before removing the protective materials from the leads of a replacement ESD device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
- (8) Minimize bodily motions when handling unpackaged replacement ESD devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ESD device).

CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

2. Product Specifications

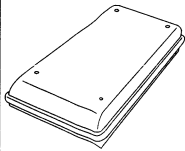
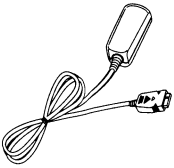
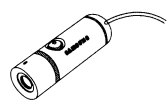
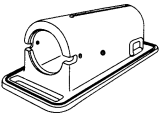
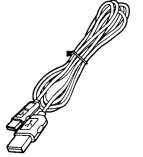
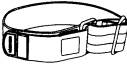
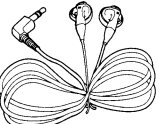
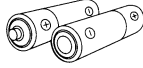
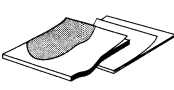
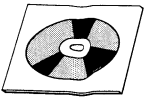
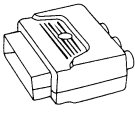
2-1 Product Specification

Model Name		VP-X105L/X110L
the CAM System		
Video Recording System		MPEG4 AVI Format
Photo System		JPEG (DPOF, Exif 2.2)
MP3		Stereo Playing
Voice		WAVE file record/play (8KHz Sampling, 16 bit, Stereo)
Memory	Internal memory	512MB (VP-X105L)
		1GB (VP-X110L)
	Memory Stick	
	Memory Stick Pro	
Recording/Playing time		Refer to page 30
CCD Pixel		1/6 inch CCD, 680K(Maximum)
Optical Zoom Ratio		x10
Focal Length		f=2.4~24mm, F1.8~2.4
Minimum Illumination		3.0 Lux
LCD Monitor		2.0 Trans Reflective, 210K
Cradle Connectors		
USB		Mini-B type (USB 2.0 High Speed)
The CAM Connector		Special 22Pin Connector
AVInput/Output		Video (1.0Vp_p), Audio (-7.5dBm 47KΩ, Stereo)
DC Power In Connector		Special 22Pin Connector
General		
Operating Temperature		0 °C~40°C (32°F~104°F)
Operating Humidity		10%~80%
Power Source		3.8V (Li-Polymer Battery pack), 4.8V (AC Adapter)
Power Consumption		3.0W (LCD ON)
Dimension(WxHxD)		2.32x 3.65 x 1.04
Weight		0.3307lb (Including the Lithium Polymer Battery Pack)
Built-in Microphone		Omni-directional Stereo condenser microphone
The CAM Connectors		
Common connector	Earphone	ø 3.5 Stereo
	AVoutput	Video (1.0p_p, 75 Ω), Audio (-7.5dBm 47KΩ, Stereo)
Cradle Connector		Special 22Pin Connector
DC Power In Connector		Special 22Pin Connector
AC Adapter		
Power Requirement		AC 100~240V , 50/60Hz
DC Output		DC 4.8V, 1.0A
Dimensions		2.76 x 1.18 x 1.65
Weight		0.18lb (Including DC cable)
Model Name		XC-L1N (External Camera Module)
the External CMOS Camera		
CMOS Pixel		1/4 inch CMOS, 320K(Maximum)
Video Resolution		640x480 (VGA)
Exposure		Auto
White Balance		Auto
Focus Type		Fixed
Focal Length		f=4.0mm, F2.6
Connector		
AV Output		Video (1.0Vp_p), Audio (-7.5dBm 47KΩ, Mono)
General		
Operating Temperature		0 °C~40°C (32°F~104°F)
Operating Humidity		20%~80%
Power Source		1.5V x 2 (Alkaline AAABattery)
Power Consumption		0.9W
Dimension(LxHxD)		3.36x 1.08 x 1.06
Weight		0.2317lb (Without the AlkalineAAABattery)
Built-in Microphone		Omni-directional condenser microphone
Battery Using Time	Alkaline Battery : Maximum 60minutes	
	Nickel Hydrogen Rechargeable	
	Battery : Maximum 100 minutes (not included)	

2-2 Chassis Product Specification

Model Name	VP-X105(L)	VP-X110(L)
Memory	512MB	1GB
Accessory	Optional	<---
Remocon / Accessory Shoe	X / X	<---
Analog In	O	<---
Easy-Q / Navigator	X / X	<---
Multi PB /Worldwide out/Multi OSD	X / X / X	<---
AV Jack/S.Jack/Ext.Camera/Headphone	O / X / O / O	<---
Light / Flash / Night Capture / LSS	X / O(LED) / X / X	<---
JPEG size	VGA (XGA IN)	<---
Memory Card	Memory Stick pro Slot	<---
USB	USB2.0	<---
IEEE1394	No	<---
Image Stabilizer	EIS	<---
Audio (Movie/V.R./MP3)	PCM(mpg)/PCM(wav)/MP3	<---
Viewfinder	No	<---
LCD	2.0", Trans-Ref.	<---
CCD	1/6", 680K / 800K	<---
Zoom/D.Zoom	10x / 100x	<---
Format	MPEG4, JPG, MP3, PCM	<---
AV In/Out	O / O	<---

2-3 Accessories Supplied with Camcorder

Accessories	Description	Part No	Remark	Accessories	Description	Part No	Remark
	Lithium Polymer Battery pack	AD43-00157B	Model standard of VP-X110L/XEU		Lens Cover	AD97-09587B	Model standard of VP-X110L/XEU
	AC Power Adapter	AD44-00097D	Model standard of VP-X110L/XEU		External Camera Module	AD97-10229A	Model standard of VP-X110L/XEU
	Audio/Video Cable	AD39-00001A	Model standard of VP-X110L/XEU		Rubber Mount	AD73-00164A	Model standard of VP-X110L/XEU
	USB Cable	AD39-00073A	Model standard of VP-X110L/XEU		Short Mount Band	AD61-02221A	Model standard of VP-X110L/XEU
	Cradle	AD97-10226B	Model standard of VP-X110L/XEU		Long Mount Band	AD61-02220A	Model standard of VP-X110L/XEU
	Earphones	AD30-00005A	Model standard of VP-X110L/XEU		Extension Cable	AD97-10235A	Model standard of VP-X110L/XEU
	Hand Strap	AD81-00010A	Model standard of VP-X110L/XEU		Alkaline Batteries (AAAX2)	4301-001035 S.N.A	Model standard of VP-X110L/XEU
	Carrying Case	AD69-00710A	Model standard of VP-X110L/XEU		Velcro Strap	AD73-00165A	Model standard of VP-X110L/XEU
	Instruction Book	AD68-00876G	Model standard of VP-X110L/XEU		Extended life Battery Pack	AD43-00157E	(Option)
	Software CD	AD46-00081A	Model standard of VP-X110L/XEU		Scart Adapter		(Option)

MEMO

3. Alignment and Adjustment

3-1 Preparing Setup

1) Before you start

- ❶ Before making adjustments, identify function of each button involved with changing the 'setup'.
- ❷ When changing the setup item, use ZOOM button.
- ❸ Press the OK button to enter the menu or select the 'setup' value.
- ❹ To escape from the 'setup' value or to change menu, use the BACK button.
- ❺ When 'setup' is completed , "Adjust Completed!" is displayed.
- ❻ When you power off, the 'setup' or control mode is exited.

2) 'Setup' button function table.

<Table 3-1>

Buttons	Operation
Press the OK button (Check and enter the lower menu)	It is used to store data after adjusting 'setup' in the setup mode menu and auto setup control menu. It is used when selecting the 'setup' item in the auto setup mode menu. It is used to enter the lower menu in the auto 'setup' mode menu.
Press the ZOOM button down (data down and menu up) Press the ZOOM button up (data up and menu down)	It is used to change data value in the setup status. It is used to change the setup items in the auto setup mode menu.
Press the BACK button (Cancel/Enter and cancel the upper menu)	It is used to enter the upper menu in the auto setup mode menu. It is used to cancel items in the auto setup mode menu. It is used to remove the control mode in the highest setup mode menu.

3) How to set the control mode.

[STEP 1]

- ❶ Connect the power to camcoder.
- ❷ Select the Video Record mode or Photo Capture mode.

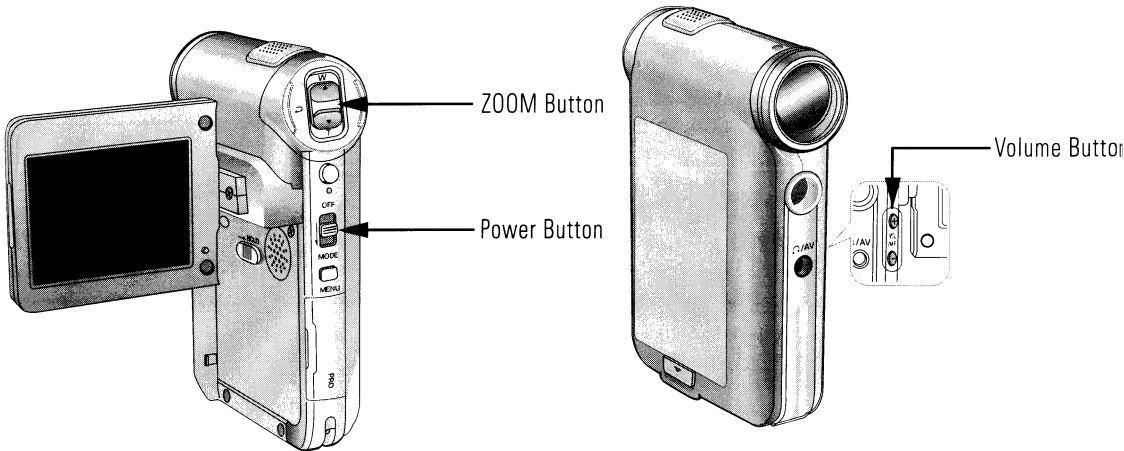


Fig. 3-1

[STEP 2]

- ❶ Press the Volume + button and ZOOM Wide button around for 5 second at the same time.
- ❷ If the control mode displays on the monitor as shown in picture 1(in the Fig. 3-2), move the ZOOM button to select "Set Adjust", and press the OK button .
- ❸ If the GUI displays on the monitor as the picture 2(in the Fig. 3-2), the control mode is set successfully.

[STEP 3]

- ❶ After finishing the setup, escape from the setup mode from within the highest menu by pressing the BACK After finishing the control, escape from the control mode from the highest menu by pressing the BACK button. To store the set value, reset the power.

4) Adjustment Steps

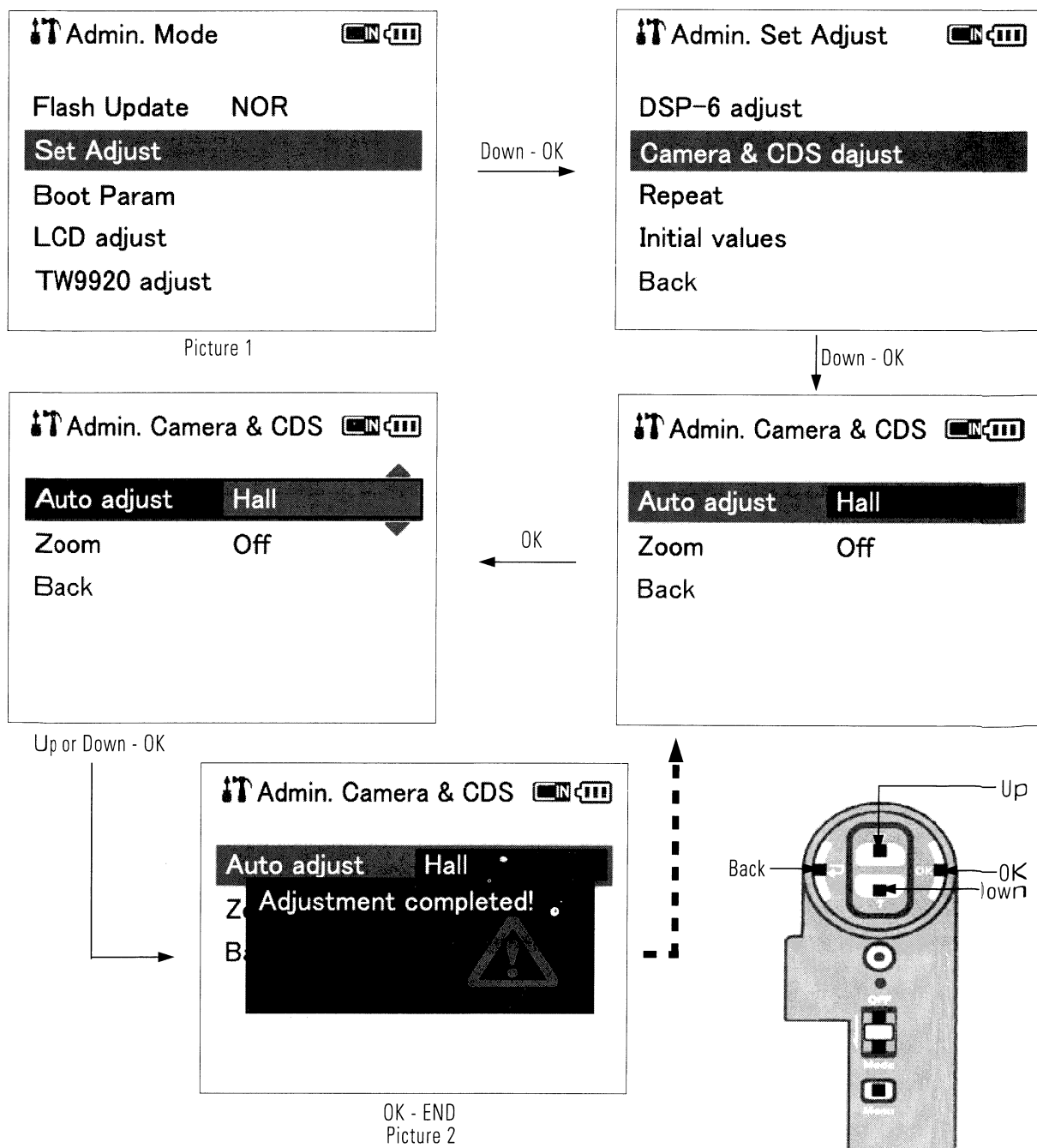


Fig. 3-2

3-2 How to adjust the camera

Note : When change EEPROM of LCD PCB/CVF PCB, it is necessary to adjust some setup items again.

Because EEPROM remembers the control value checked in each step.

Therefore, it should be controlled for storing data when changing them.

1) Items to adjust again after changing the Lens Ass'y

① Lens Zoom Track

② Auto HALL

③ Auto IRIS

2) Lists to setup again after changing EEPROM and Main PCB

① Lens Zoom Track

② Zoom VR Center

③ Auto HALL

④ Auto IRIS

⑤ Auto White Balance (3100K)

⑥ Auto White Balance (5100K)

1) Auto HALL setup

- ① Connect the SET to Cradle.
- ② Connect the image input port to TV.
- ③ After entering the setup mode, press the OK button in "Set Adjust" menu.
- ④ Press the OK button in "Camera & CDS adjust" menu.
- ⑤ Press the OK button in "Auto adjust" menu.
- ⑥ Press the OK button by finding Hall with the ZOOM button.
(HALL is set basically.)
- ⑦ In this case,
 - DSP opens IRIS and finds the highest value of HALL.
 - DSP closes IRIS and finds the lowest value of HALL and stores data value.
- ⑧ "Adjustment completed!" displays after finishing setup. Finish it by pressing the OK button.

2) Auto IRIS level setup

- ① Connect the SET to Cradle.
- ② Connect the image input port to TV.
- ③ After entering the setup mode, press the OK button in "Set Adjust" menu.
- ④ Press the OK button in "Camera & CDS adjust" menu.
- ⑤ Press the OK button in "Auto adjust" menu.
- ⑥ Press the OK button by finding IRIS with the ZOOM button.
- ⑦ In this case,
 - DSP opens IRIS and finds the highest value of IRIS.
 - DSP closes IRIS and finds the lowest value of IRIS and stores data value.
- ⑧ Adjustment completed!" displays after finishing setup. Finish it by pressing the OK button.

3) Auto LENS setup

Caution : The focus is set within the range. The focus lens' position moves after the zoom lens.

While setup, DSP performs measuring the focus distance from the near to the distance place.

- ❶ The camera should be in "E-E" mode (Video Record, Photo Capture).
- ❷ Make the focus chart.
- ❸ Make the camera around 3 meters from the focus chart and the focus of the lens vertical.
The focus chart should be attached to white or grey even wall.
- ❹ Connect the image input port to TV.
- ❺ Press the OK button after entering "Set Adjust".
 - Press the OK button in "Camera & CDS adjust" menu.
 - Press the OK button in "Auto adjust" menu.
 - Press the OK button after finding "Lens 3m" with the ZOOM button.
 - Don't force the zoom and focus lens when setup.
- ❻ After setup, finish the OK button and "Adjustment completed!" displays. Finish it by pressing the OK button.

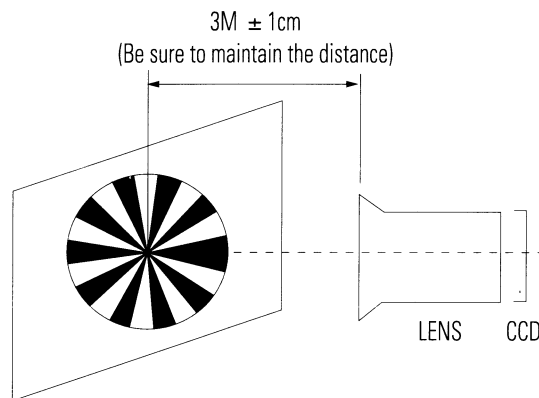


Fig. 3-3

4) Auto White Balance setup (3100K)

- ❶ The camera should be in "E-E" mode (Video Record, Photo Capture).
- ❷ Prepare the grey scale chart of 3100° K.
- ❸ Connect the image output port to vector scope and TV.
- ❹ Press the OK button after entering "Set Adjust".
 - Press the OK button in "Camera & CDS adjust" menu.
 - Press the OK button in "Auto adjust" menu.
- ❺ Make the camera situated in 40 μ s to the 3100° K grey scale chart and make the intensity of illumination 1500 ~ 2000 Lux.
 - Press the OK button by finding "WB 3100" with the ZOOM button.
- ❻ Check the white point comes to the center of display at the vector scope.
- ❼ After entering the setup mode, press the OK button in "Set Adjust" menu.

5) Auto White Balance setup (5100K)

- ❶ The camera should be in "E-E" mode (Video Record, Photo Capture).
- ❷ Prepare the grey scale chart of 5100° K.
- ❸ Connect the image output port to vector scope and TV.
- ❹ After entering the control mode, press the OK button after entering "Set Adjust".
 - Press the OK button in "Camera & CDS adjust" menu.
 - Press the OK button in "Auto adjust" menu.
- ❺ Make the camera situated in 40 μ s to the 5100° Δ K grey scale chart(3100° K grey scale chart + C16 filter) and make the intensity of illumination 1500 ~ 2000 Lux.
 - Press the OK button by finding "WB 5100" with the ZOOM button.
- ❻ Check the white point comes to the center of display at the vector scope.
- ❼ After setup, finish the OK button and "Adjustment completed!" displays. Finish it by pressing the OK button.

3-3 How to setup LCD

3-3-1 If OSD such as a picture below with the color bar, enter the setup mode.

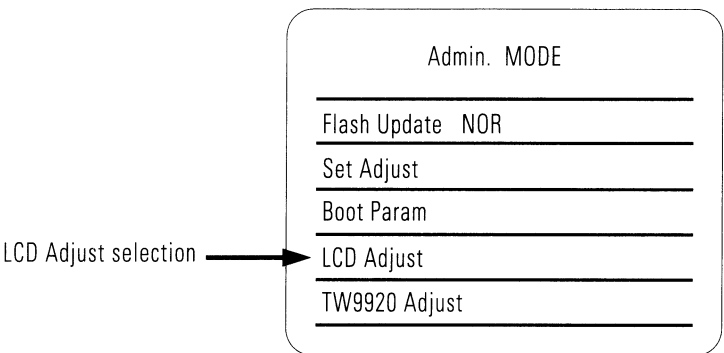


Fig. 3-4

3-3-2 If all setup is finished, save them and transfer the power selection switch to 'OFF'.

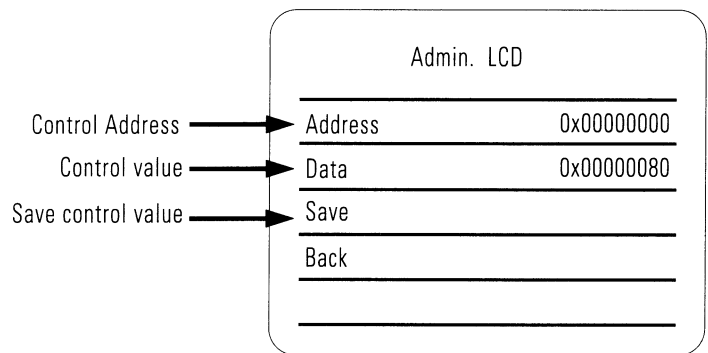


Fig. 3-5

1) VCO setup : DC Level should be setup as $1.68V \pm 0.1V$.

- Setup mode : VCO (setup address:0C)
- Setup point : TPL08-VCO
- Measuring device : DIGITAL VOLTMETER(or OSCILLOSCOPE)
- Save it after finishing setup.

2) COLOR setup : Make "WHITE" level accorded with "BLUE" level.

- Setup mode : COLOR (setup address:0A)
- Setup point : TPL07-BOUT
- Measuring device : OSCILLOSCOPE
- Save it after finishing setup.

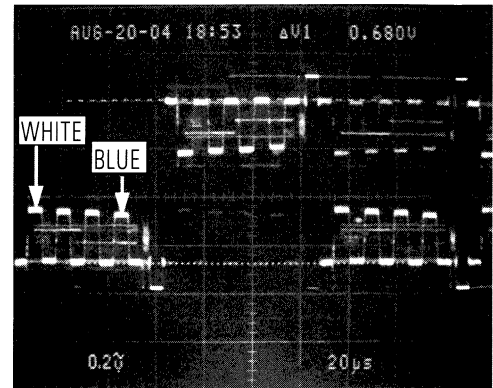


Fig. 3-6

3) HUE setup : Make "RED" level accorded with "YELLOW" level.

- Setup mode : HUE (setup address:0B)
- Setup point : TPL07-BOUT
- Measuring device : OSCILLOSCOPE
- Save it after finishing setup.

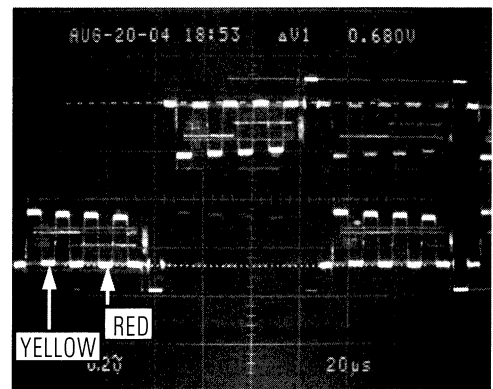


Fig. 3-7

4) BRIGHT setup : Setup "A"(Black-Black)level as $8.0 \pm 0.1V_{p-p}$.

- Setup mode : BRIGHT (setup address:00)
- Setup point : TPL05-GOUT
- Measuring device : OSCILLOSCOPE
- Save it after finishing setup.

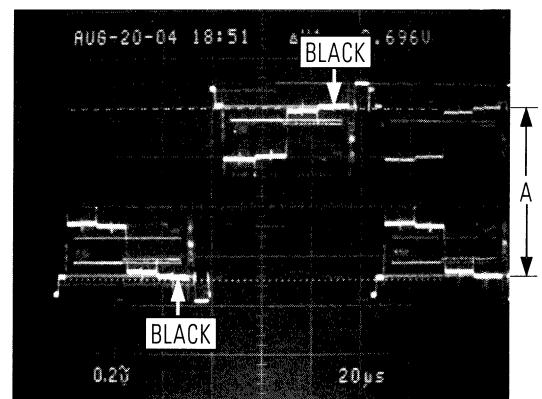


Fig. 3-8

5) CONTRAST setup : setup "B"(Black-White) as $3.0 \pm 0.1V_{p-p}$.

- Setup mode : CONTRAST (setup address:03)
- Setup point : TPL05-GOUT
- Measuring device : OSCILLOSCOPE
- Save it after finishing setup.

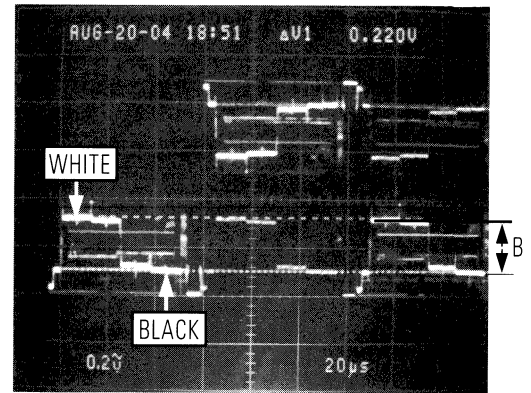


Fig. 3-9

6) SUB BRIGHT-R control: setup "A"(Black-White) as $8.0 \pm 0.1V_{p-p}$.

- Setup mode : SUB BRIGHT-R (setup address:01)
- Setup point : TPL06-ROUT
- Measuring device : OSCILLOSCOPE
- Save it after finishing setup.

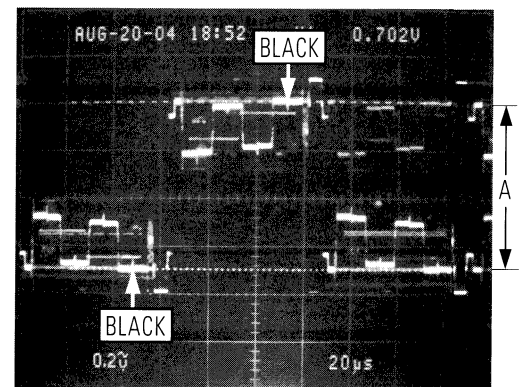


Fig. 3-10

7) SUB BRIGHT-B setup : setup "A"(Black-White) as $8.0 \pm 0.1V_{p-p}$.

- Setup mode : SUB BRIGHT-B (setup address:02)
- Setup point : TPL07-BOU
- Measuring device : OSCILLOSCOPE
- Save it after finishing setup.

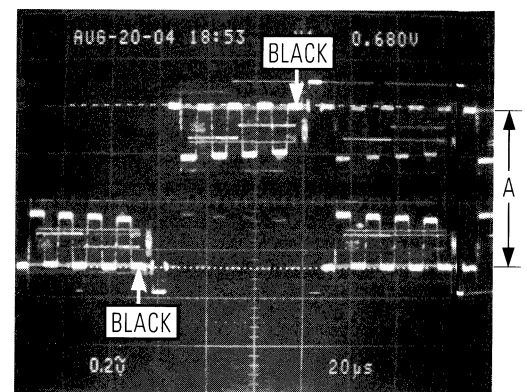


Fig. 3-11

3-3-3 LCD setup TP point

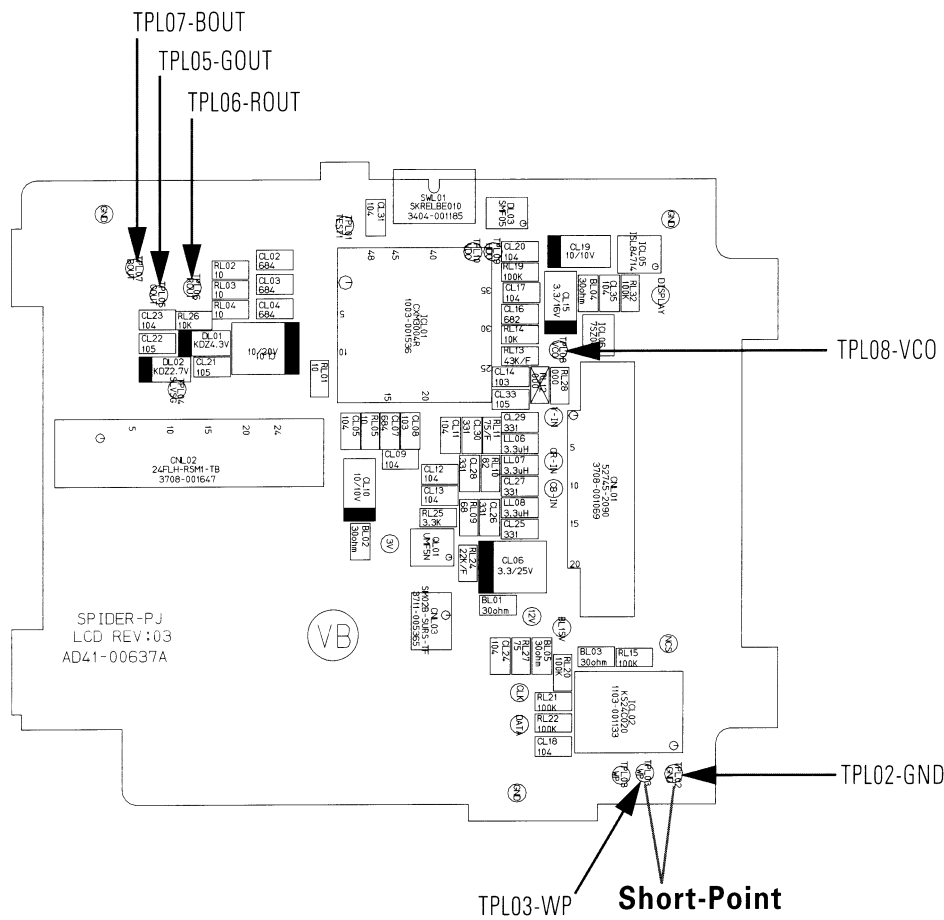


Fig. 3-12

3-3-4 LCD INITIAL DATA

<Table 3-2>

ADDRESS	PAL DATA	NTSC DATA
00	A0h	A0h
01	41h	41h
02	41h	41h
03	8Eh	8Eh
04	40h	40h
05	40h	40h
06	31h	31h
07	52h	52h
08	00h	00h
09	4Eh	4Eh
0A	3Ah	3Ah
0B	44h	40h
0C	CAh	CAh
0D	3Bh	2Fh
0E	44h	44h
0F	00h	00h
10	21h	21h
11	17h	17h
12	30h	31h
13	03h	07h
14	1Ah	1Ah
15	00h	00h
16	08h	08h
17	00h	00h

3-4 Flash Update

Note : Do not try updating in battery mode.

It should be tried after getting connected to the AC adapter.

Getting power off while updating may cause a whole loss of the OS.

3-4-1 Settings for Update

1) To copy files to the memory stick (In windows 2000 or XP)

- ❶ Change the file name and expander of the blex-16-nt or blex-16-pal to boot.bin, which is copied in the uppermost folder of the memory stick according to the model type (NTSC or PAL).
- ❷ Copy the image_NTSC_*.bin or imgae_PAL_*.bin to the uppermost folder of the memory stick, then change the file names to image.bin according to the model type (NTSC or PAL).
- ❸ Files should be copied and name-changed in case of NTSC model to blex-16-nt and image_NTSC_*.bin and PAL model to blex-16-pal and image_PAL_*.bin.
- ❹ Insert the memory stick to the camcorder.

2) How to update

[STEP 1]

- ❶ Turn the camcorder on.
- ❷ Select the "Video Record" or "Photo Capture" mode.

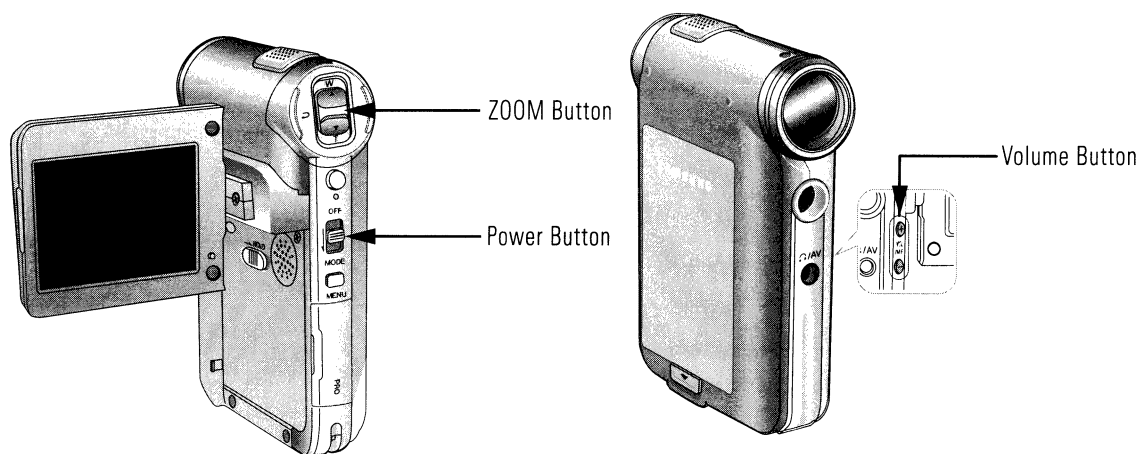


Fig. 3-13

[STEP 2]

- ❶ Press the "Volume +" and "Zoom Wide" buttons at the same time for 5 seconds or more.
- ❷ If the Admin mode indicator as you see at the picture 1(in the Fig. 3-14) is on the monitor, select the " Flash Update " by adjusting the "Zoom" button and press the "OK" button.
- ❸ Select "NOR" and press "OK" button.
- ❹ "Flash Updating" message come up on the monitor as you see at the picture 2 (in the Fig. 3-14) shows the updating is in process. Please make sure that the camcorder is turned on. If the message disappears and the Admin mode screen appears again on the monitor, it means that the update is finished successfully.

[STEP 3]

- ❶ It returns to the Admin mode again automatically after the update is finished. Please press the "back" button to go out of the uppermost menu. To apply the updated version, please turn the power off and on.

3) Update process

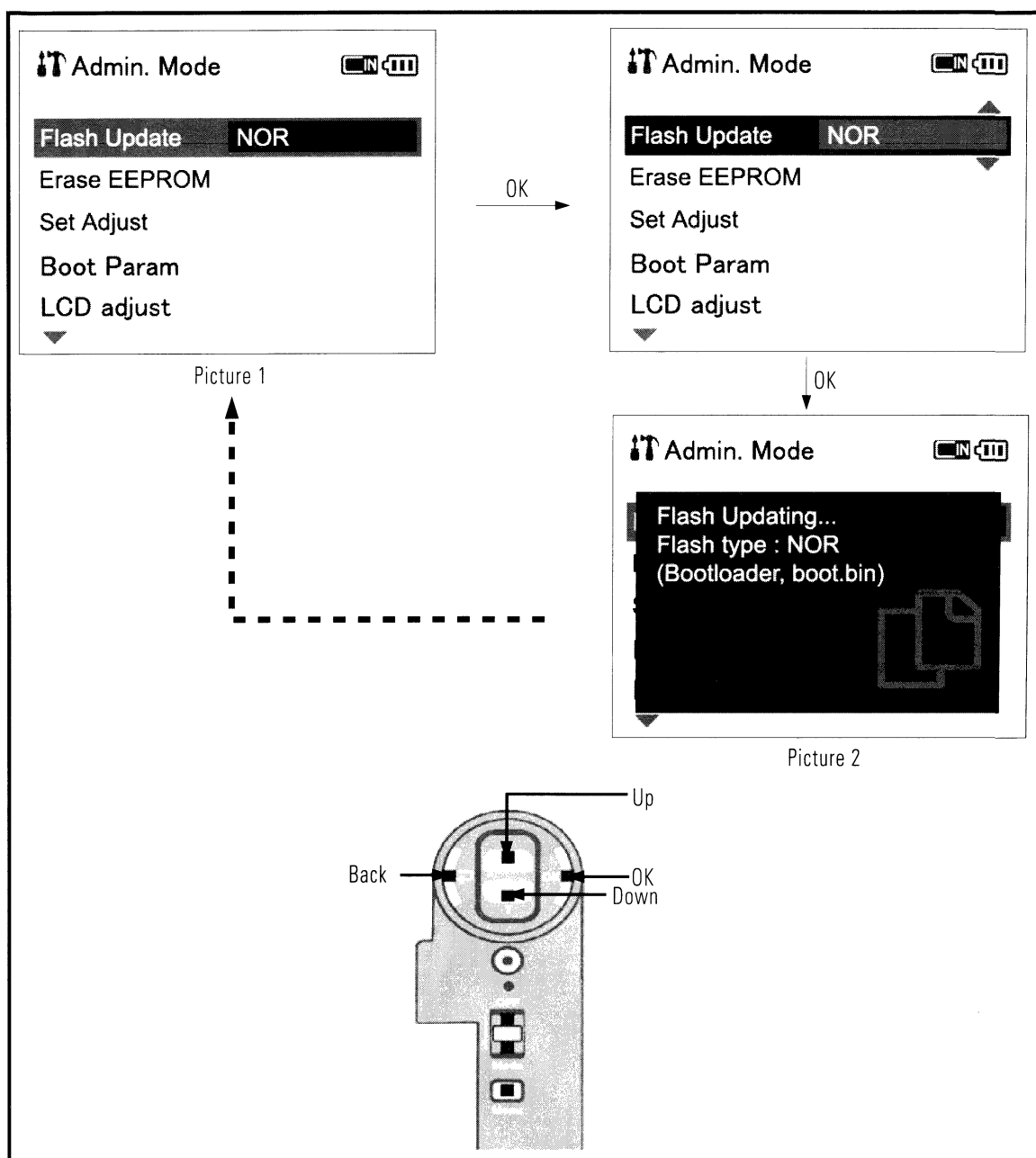


Fig. 3-14

4) Troubleshooting

A) When the memory stick fails to be recognized.

- 1) Remove the memory stick and turn the power off and on.
Then enter the Admin mode as you see at picture 2 (in pic 3-14)
- 2) Insert the memory stick and change the mode to the external memory mode.
- 3) Go on from the 2) in **[STEP 2]**.

B) When it fails to copy the files.

- 1) When the file name is incorrect - boot.bin, image.bin
- 2) When the memory stick is removed from the PC before the file copy process is completed.
 - Please make sure that the message to notify that the removal is allowed comes up on the monitor before trying detachment.

Note : Erase EEPROM should be performed at the presence of controlling unit against the possibility of whole setting's being default.

MEMO

4. Disassembly and Reassembly

4-1 Cabinet and PCB

4-1-1 Ass'y CASE RIGHT Removal

- 1) Remove COVER I/O ❶.
- 2) Remove 6 Screws ❸, ❹ and then Left up ASSY CASE RIGHT ❷.

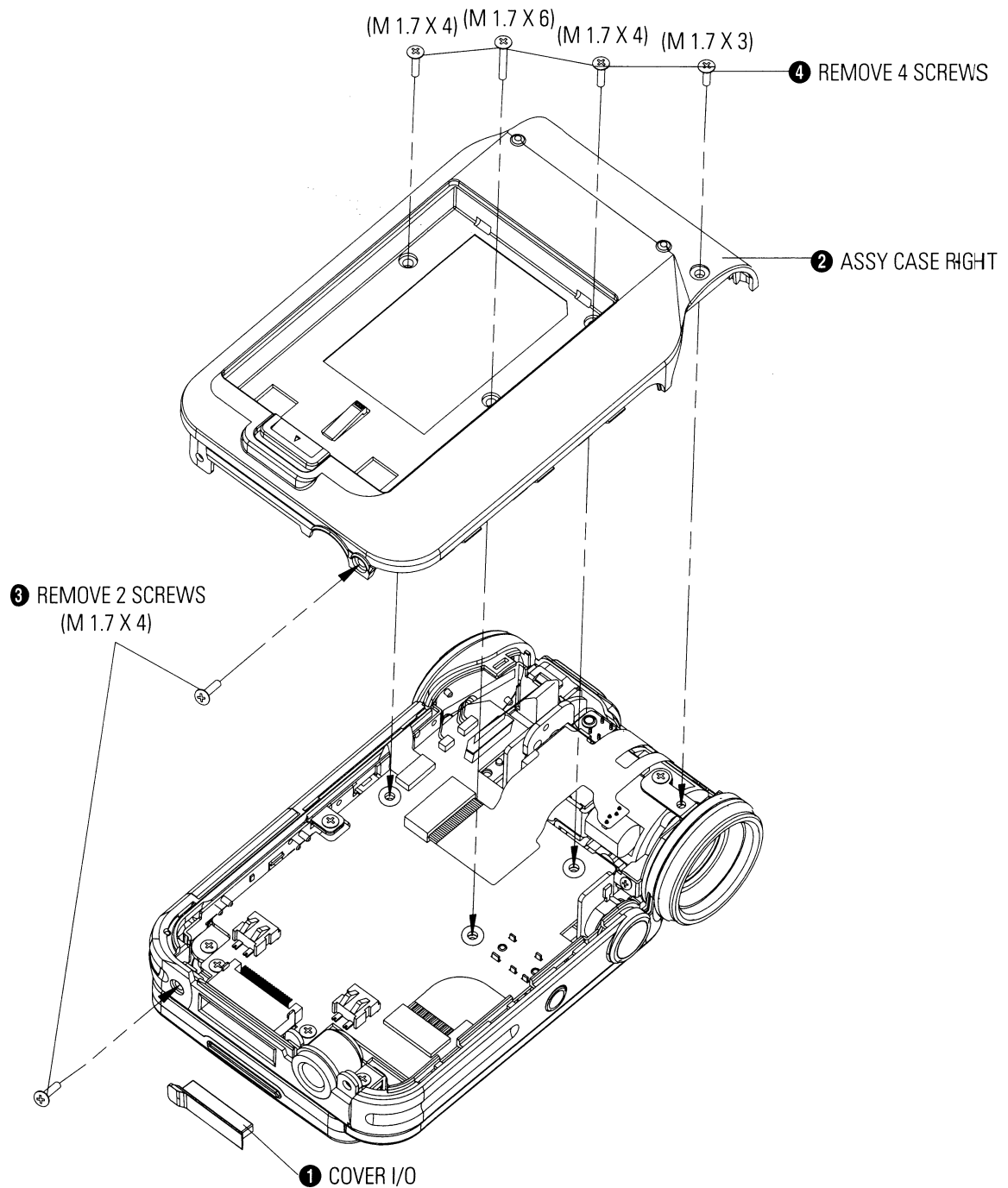


Fig. 4-1 Ass'y CASE RIGHT Removal

4-1-2 Ass'y CASE REAR Removal

1) Remove 3 Screws ❶, ❷ and then Remove ASSY CASE REAR ❸.

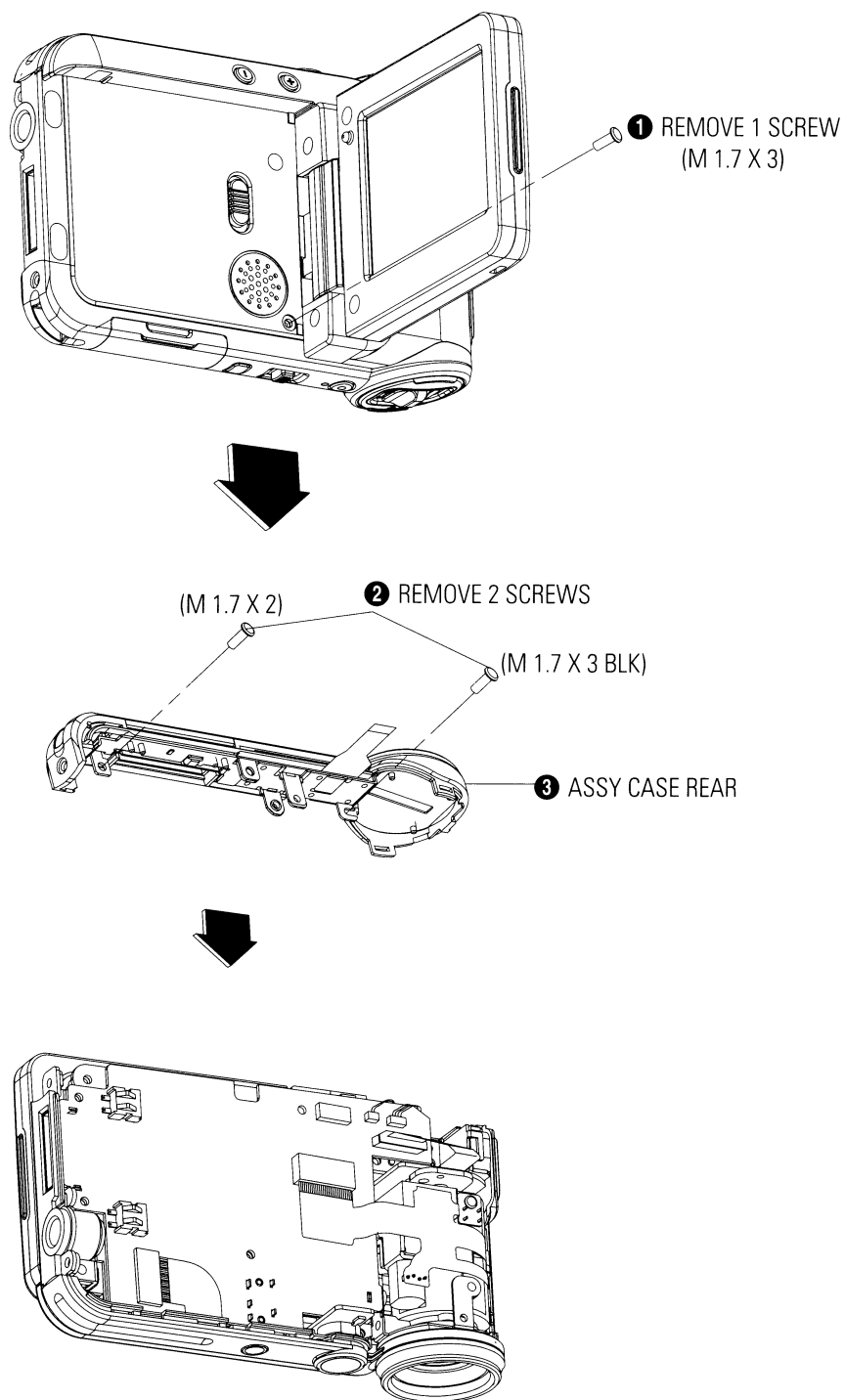


Fig. 4-2 Ass'y CASE REAR Removal

4-1-3 Ass'y MAIN BOARD and CAMERA Removal

- 1) Remove 2 Screws ❶ and then Remove ASSY MAIN BOARD ❷.
- 2) Remove 2 Screws ❸ and then Remove ASSY CAMERA ❹.

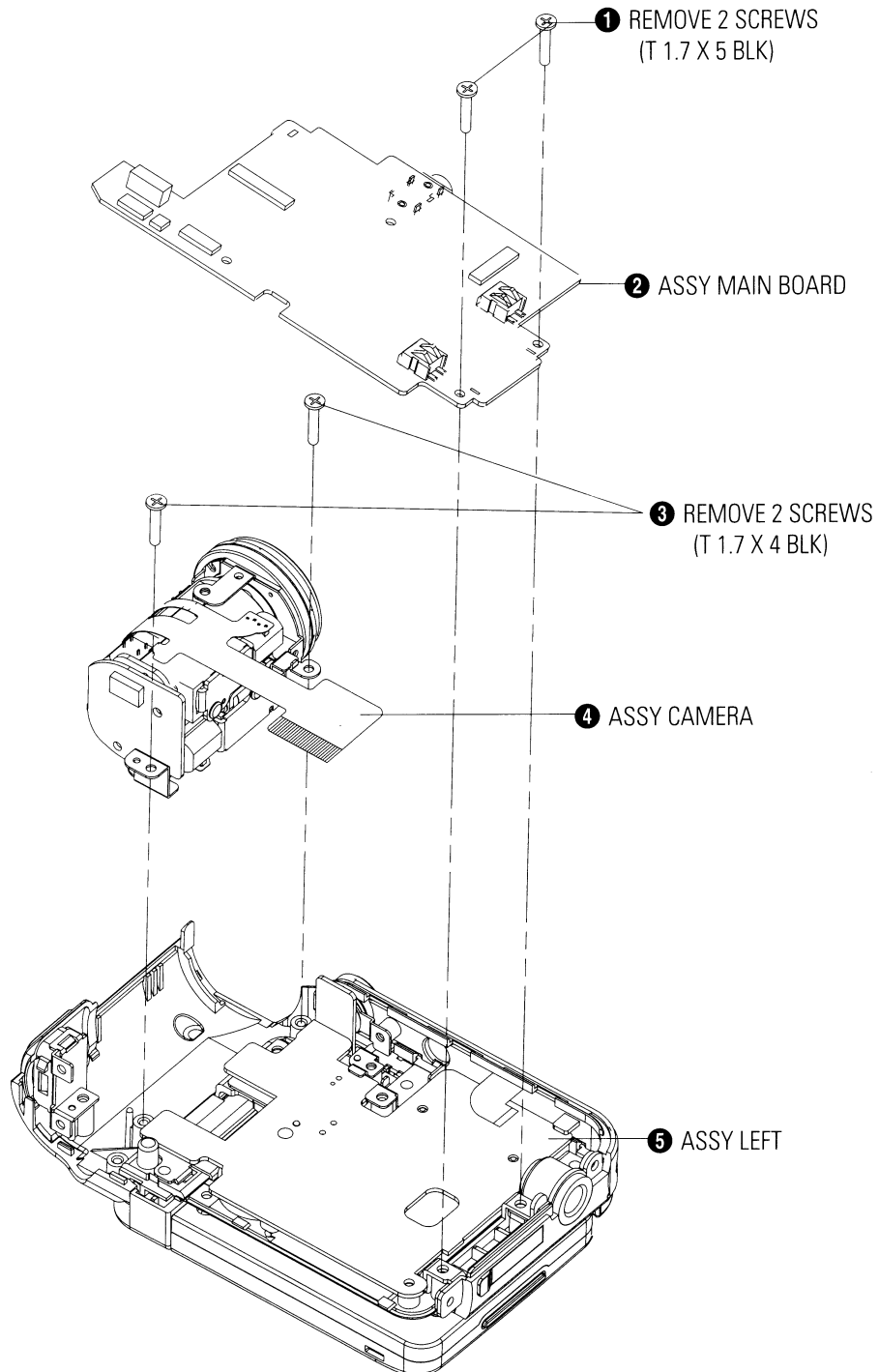


Fig. 4-3 Ass'y MAIN BOARD and CAMERA Removal

4-1-4 Ass'y LCD Removal

- 1) Remove 2 Screws ❶ and then Remove SHIELD-LEFT ❷ and BREAKET COVER ❸.
- 2) Remove 2 Screws ❹ and then Remove COVER HINGE ❺.
- 3) Remove 2 Screws ❻ and then Remove ASSY LCD ❼.

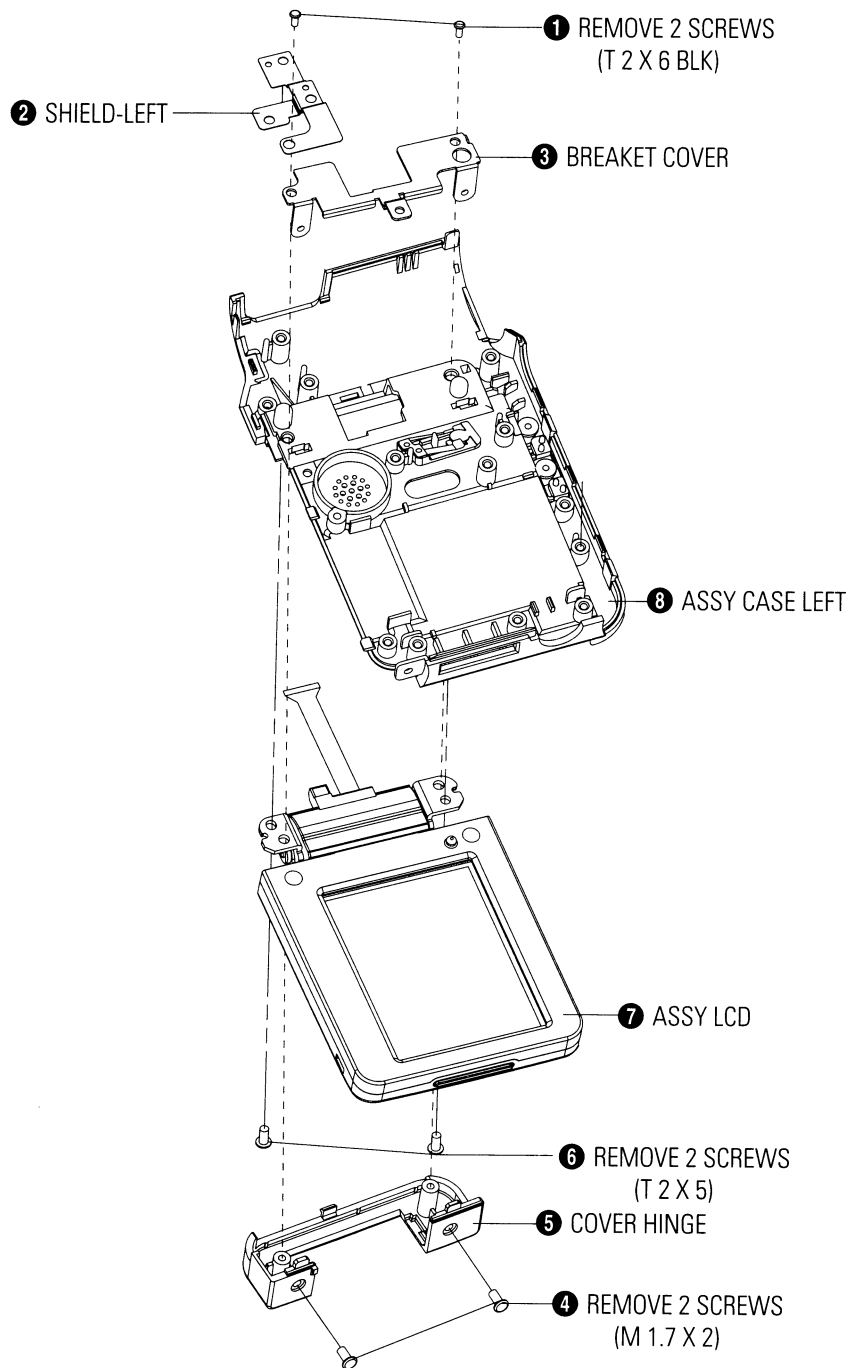
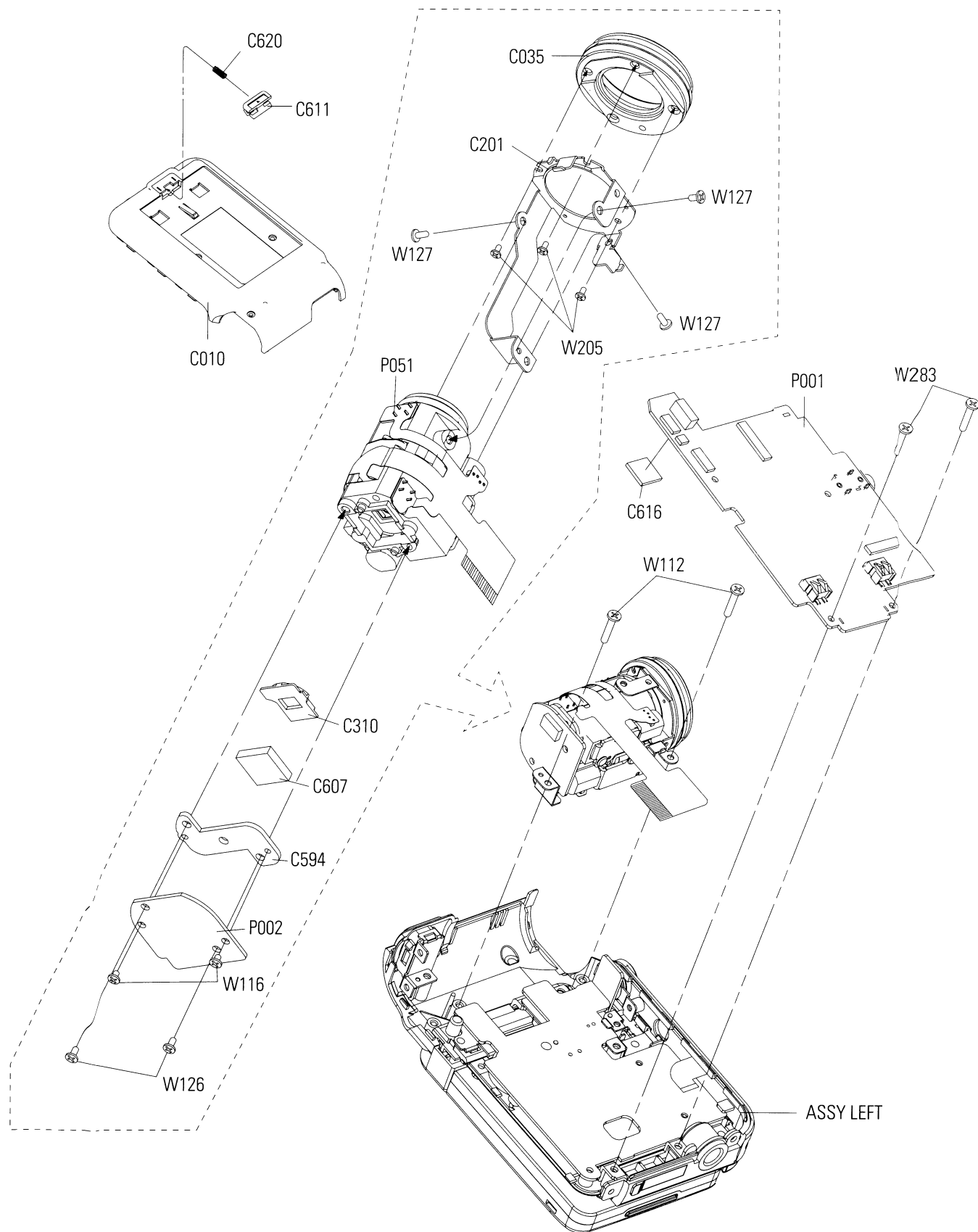


Fig. 4-4 Ass'y LCD Removal

5. Exploded View and Parts List

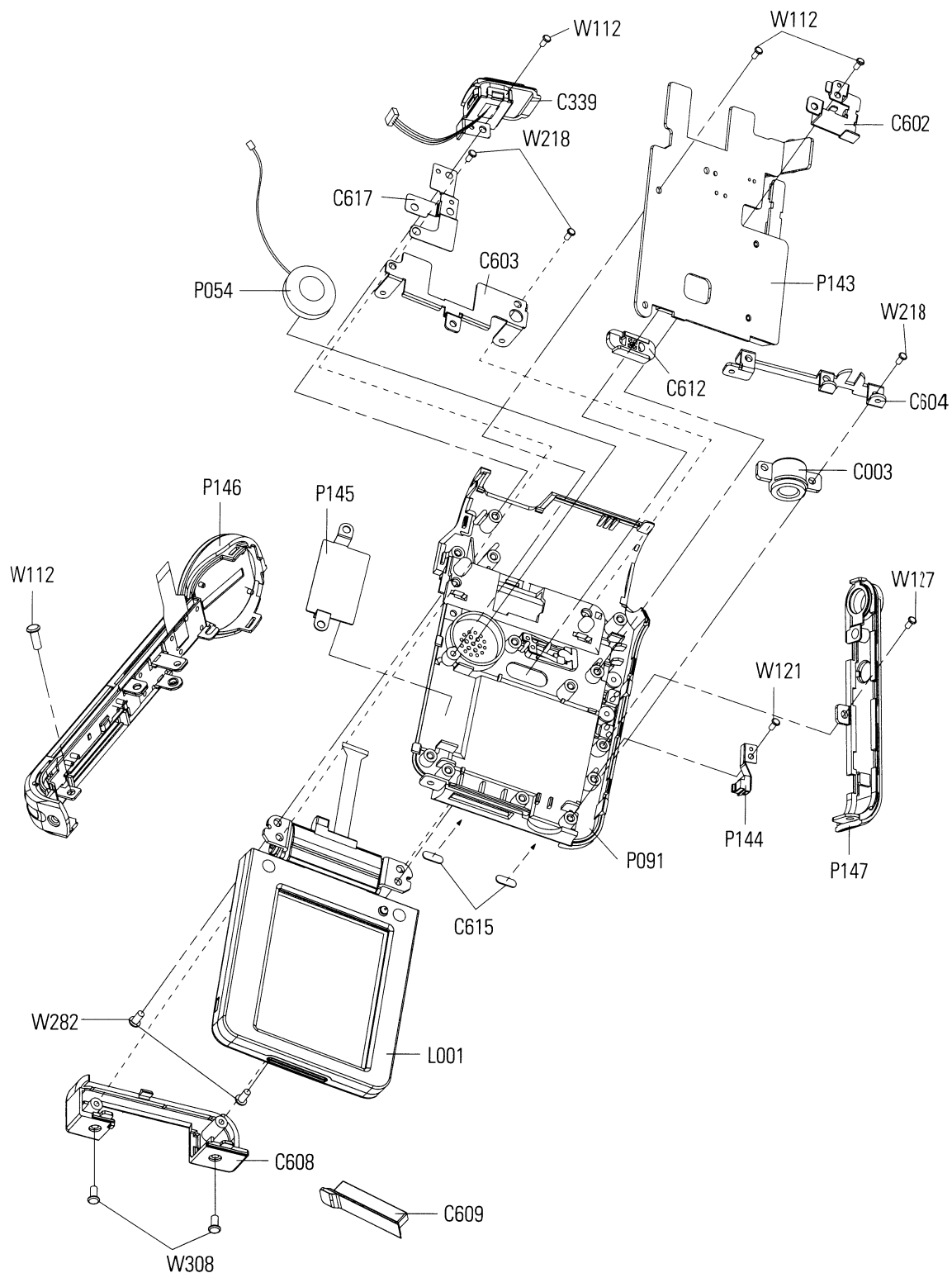
	Page
5-1 Ass'y Chassis - - - - -	5-2
5-2 Ass'y Left - - - - -	5-4
5-3 Ass'y LCD - - - - -	5-6

5-1 Ass'y Chassis



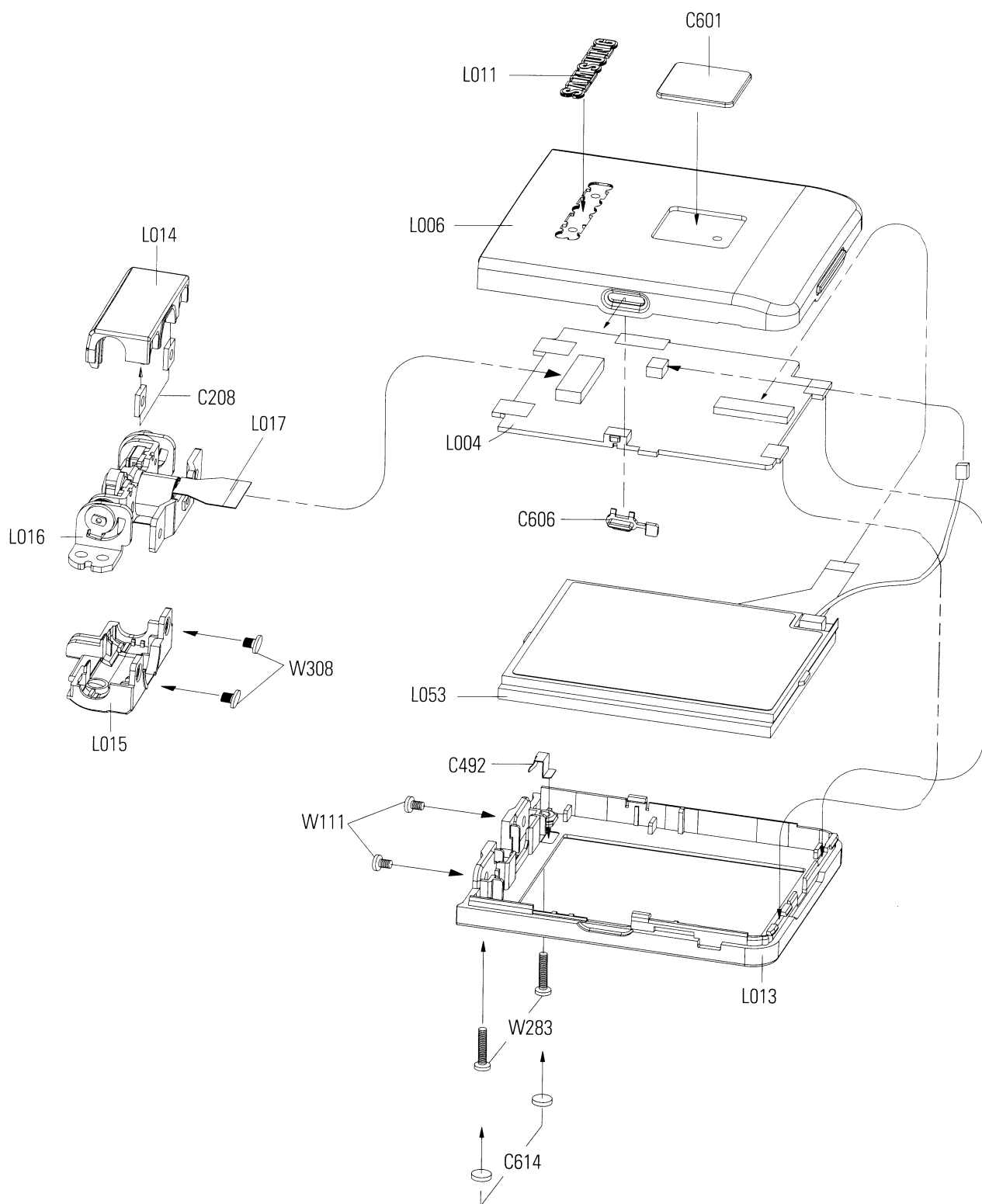
Loc. No	Parts No.	Description ; Specification	Remark
C010	AD61-01840G	CASE-RIGHT;SPIDER-X,PC+ABS,T1.5,W92.7,L5	
C035	AD67-00284A	LENS-HOOD;SPIDER,AL,SIL,11.9,T0.6,-,-	
C201	AD61-01825A	BRACKET-LENS;SPIDER,SUS,T0.4,W39,L24.8,S	
C310	AD73-00134A	RUBBER-CCD;SPIDER,SILICON,-,60,-,BLK,-,-	
C594	AD61-01834B	PLATE-CCD;SPIDER,Cu C1100,T1.0,W17.2,L20	
C607	0605-001097	CCD;COLOR/PAL,SOP,14P,8.2x8.2x2.4mm,800K	
C611	AD64-01262C	KNOB-BATTERY LOCK;SPIDER,PC+ABS,T4.2,W6.	
C616	AD73-00147A	RUBBER-PCB;SPIDER-PJ,PORON,W7.0*L7.0,MX-	
C620	AD61-02100A	SPRING ETC-EJECT;SPIDER-PJ,SUS304WPB,Pie	
P001	AD97-10153B	ASSY-MAIN BOARD;SPIDER-X,VP-X105L,512MB,P	VP-X105(L) Only
	AD97-10153C	ASSY-MAIN BOARD;SPIDER-X,VP-X110L,1GB,PA	VP-X110(L) Only
P002	AD97-09277A	ASSY-CCD BOARD;SPIDER-PJ,VP-M102,PAL	
P051	AD97-09378A	ASSY-LENS ZOOM;PC,SSCL, $\sqrt{2}$, 10X	
W112	6003-001453	SCREW-TAPTITE;BH,+,B,M1.7,L4,ZPC(BLK)	
W116	6001-001527	SCREW-MACHINE;CH(0.3),+,M1.7,L2.0,NI PLT	
W126	6003-001300	SCREW-TAPTITE;CH,+,B,M1.7,L4,ZPC(BLK),SW	
W127	6003-001292	SCREW-TAPTITE;CH(0.3),+,B,M1.7,L3,ZPC(BL	
W205	6001-001529	SCREW-MACHINE;CH(0.3),+,M1.4,L2.0,NI PLT	
W283	6003-001295	SCREW-TAPTITE;PL,+,B,M1.7,L6,NI PLT,SWCH	

5-2 Ass'y Left



Loc. No	Parts No.	Description ; Specification	Remark
C003	AD61-01846B	BASE-TRIPOD;SPIDER-X,PC+ABS K2261,T2.0,W	
C339	AD97-09301C	ASSY-MIC;- ,SPIDER-X,ASSY MIC	
C602	AD61-01826A	BRACKET-AV JACK;SPIDER,SUS 304,T0.4,W16.	
C603	AD61-01827A	BRACKET-COVER;SPIDER,SUS 304,T0.4,W39.7,	
C604	AD61-01832A	BRACKET-IO JACK;SPIDER,SUS 304,T0.4,W38,	
C608	AD63-00814A	COVER-HINGE;SPIDER-X,PC + ABS,-,40,20,-,	
C609	AD63-00647B	COVER-IO;SPIDER,SILICON,-,W15.6,L3.2,-,	
C612	AD64-01263B	KNOB-LOCK;SPIDER-X,PC+ABS,T3.0,W13.4,L5.	
C615	AD73-00143D	RUBBER-LEFT;SPIDER-X,URETHANE,3.6,90,0.6	
C617	AD63-00726A	SHIELD-LEFT;SPIDER-PJ,C5210,T0.15,20,30,	
L001	AD97-10155A	ASSY-LCD;ASSY,SPIDER-X/EXP,BLUE	
P054	AD97-09552A	ASSY-SPEAKER;Nd-Fe-B,SPIDER,13pi,0.4W,8o	
P091	AD97-10149A	ASSY-CASE LEFT;ASSY,SPIDER-X,BLACK/EXP	
P143	AD97-09688A	ASSY-FPC LEFT;FPC,SPIDER-PJ,LEFT KEY, 18	
P144	AD97-09210C	ASSY-LCD LATCH;ASSY,SPIDER/BLUE,BLACK	
P145	AD97-09484A	ASSY-PLATE;ASSY,SPIDER-PJ,BRKT+D/TAPE	
P146	AD97-09223C	ASSY-REAR MIDDLE;ASSY,SPIDER-X,BLUE	
P147	AD97-09209B	ASSY-FRONT MIDDLE;ASSY,SPIDER-X,BLUE	
W112	6003-001453	SCREW-TAPTITE;BH,+,B,M1.7,L4,ZPC(BLK)	
W121	6002-001132	SCREW-TAPPING;BH,T0.5,+,2,M1.7,L3.0,BLK,	
W127	6003-001292	SCREW-TAPTITE;CH(0.3),+,B,M1.7,L3,ZPC(BL	
W206	6001-001373	SCREW-MACHINE;PH,T0.5,+,M1.7,L3.0,BLK,SW	
W218	6003-001438	SCREW-TAPTITE;BH,+,B,M2,L6,ZPC(BLK)	
W282	6003-001446	SCREW-TAPTITE;BH,+,M2,L5,NI PLT	
W308	6001-001915	SCREW-MACHINE;CH,+, -,M1.7,L2.5,ZPC(BLK),	

5-3 Ass'y LCD



Loc. No	Parts No.	Description ; Specification	Remark
C208	AD61-12033A	BRACKET-NUT;SV-D10,SECC,-,-,-,T0.8	
C492	AD61-01851A	BRACKET-GROUND;SPIDER,C5210,T0.15,-,-,SI	
C601	AD64-01421A	BADGE-PETNAME;SPIDER X-PJ,Ni,T0.6,W13.0,L	
C606	AD64-01272B	BUTTON-DISPLAY;SPIDER-X,PC+ABS K2261,10,	
C614	AD73-00135D	RUBBER-LCD;SPIDER-X,URETHANE,Pi 3.3,-,T0	
L004	AD97-09283B	ASSY-LCD BOARD;SPIDER X-PJ,SC-M105/XAA,2	
L006	AD61-02203A	CASE-LCD TOP;SPIDER-X/EXP,PC+ABS,-,W50,L	
L011	AD64-01259A	BADGE-SAMSUNG;SPIDER,AL,T0.2,W4.0,L23.4,	
L013	AD61-02204A	CASE-LCD BOTTOM;SPIDER-X/EXP,PC ABS NH-1	
L014	AD63-00642G	COVER-HINGE TOP;SPIDER-X,PC+ABS K2261,1.	
L015	AD63-00643G	COVER-HINGE BOTTOM;SPIDER-X,PC+ABS K2261	
L016	AD97-09212A	ASSY-HINGE;ASSY,SPIDER,-	
L017	AD97-06797A	ASSY-LCD FPC;FPC,GADGET-PJ/BASIC,20P+S/W	
L053	AD59-00094A	LCD PANEL;ACX510BKM,HR 2.0 INCH,960X220D	
W206	6001-001373	SCREW-MACHINE;PH,T0.5,+,M1.7,L3.0,BLK,SW	
W305	6003-001573	SCREW-TAPTITE;CH,+, -,B,M1.7,L6,ZPC(BLK),	
W308	6001-001915	SCREW-MACHINE;CH,+, -,M1.7,L2.5,ZPC(BLK),	

MEMO

6. Electrical Parts List

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
P001	AD97-10153B	ASSY-MAIN BOARD;SPIDER-X,VP-X105L512MB,P	VP-X105(L) Only	C923	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
	AD97-10153C	ASSY-MAIN BOARD;SPIDER-X,VP-X110L1GB,PA	VP-X110(L) Only	C924	2203-005619	C-CER,CHIP;4700nF,10%,16V,X5R,TP,3216	
B501	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C925	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
B502	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C926	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP,2012	
B906	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C927	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP,2012	
BDD01	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C929	2404-001020	C-TA,CHIP;10uF,20%,10V,GP,TP,3216	
BDD02	3301-001658	BEAD-SMD;600ohm,1608,200mA,TP,1135ohm/		C930	2404-001020	C-TA,CHIP;10uF,20%,10V,GP,TP,3216	
BDD03	3301-001658	BEAD-SMD;600ohm,1608,200mA,TP,1135ohm/		C931	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
BM01	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C932	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,1005	
BM02	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C933	2404-001020	C-TA,CHIP;10uF,20%,10V,GP,TP,3216	
BM03	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C934	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
BM04	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C935	2203-005921	C-CER,CHIP;1000nF,20%,4V,X5R,TP,2012	
BM05	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C936	2404-001251	C-TA,CHIP;22uF,20%,7V,-,TP,3216	
BM06	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C937	2203-005921	C-CER,CHIP;1000nF,20%,4V,X5R,TP,2012	
BM71	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C938	2404-001247	C-TA,CHIP;22uF,20%,4V,WT,TP,2012	
BM72	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C939	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
BM73	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C940	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
BO01	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C941	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
BO03	3301-001658	BEAD-SMD;600ohm,1608,200mA,TP,1135ohm/		C942	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,1005	
BO05	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		C943	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
BT901	4302-001165	BATTERY-LI(2ND);3V,3.4mAh,-,10uA,2.8V,0.		C945	2203-005481	C-CER,CHIP;47nF,10%,10V,X7R,TP,1005,-	
C501	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C946	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C502	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C947	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C503	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C948	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C504	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C949	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C505	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C950	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C506	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C951	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C507	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C952	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C508	2203-000278	C-CER,CHIP;0.01nF,0.5pF,50V,COG,1005		C954	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C509	2203-000278	C-CER,CHIP;0.01nF,0.5pF,50V,COG,1005		C955	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C510	2203-000278	C-CER,CHIP;0.01nF,0.5pF,50V,COG,1005		C957	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C511	2203-000278	C-CER,CHIP;0.01nF,0.5pF,50V,COG,1005		C958	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C512	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C959	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C513	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP,2012		C960	2203-005922	C-CER,CHIP;4700nF,20%,6.3V,X5R,TP,2012	
C514	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C961	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
C515	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP,2012		C963	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C516	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C964	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C613	AD73-00144A	RUBBER-LCD LATCH;SPIDER-PJ,PORON/LE-20,W		C966	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
C616	AD73-00147A	RUBBER-PCB;SPIDER-PJ,PORON,W7.0*L7.0,MX-		C970	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
C901	2203-000234	C-CER,CHIP;0.1nF,5%,50V,COG,TP,1005		C972	2203-005921	C-CER,CHIP;1000nF,20%,4V,X5R,TP,2012	
C902	2203-001432	C-CER,CHIP;47nF,+80-20%,16V,Y5V,1005		C973	2404-001251	C-TA,CHIP;22uF,20%,7V,-,TP,3216	
C903	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C974	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
C904	2203-000234	C-CER,CHIP;0.1nF,5%,50V,COG,TP,1005		C975	2203-000234	C-CER,CHIP;0.1nF,5%,50V,COG,TP,1005	
C905	2203-001432	C-CER,CHIP;47nF,+80-20%,16V,Y5V,1005		C976	2203-005261	C-CER,CHIP;1000nF,10%,25V,X7R,-,3216	
C906	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C977	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP,1608	
C907	2203-000234	C-CER,CHIP;0.1nF,5%,50V,COG,TP,1005		C978	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP,1608	
C908	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C979	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
C909	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C980	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	
C910	2203-000234	C-CER,CHIP;0.1nF,5%,50V,COG,TP,1005		C981	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP,1608	
C911	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C982	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP,1608	
C912	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C983	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012	
C913	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C984	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP,1608	
C914	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		C985	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP,1608	
C915	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		CA01	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C916	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		CA02	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP,2012	
C917	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		CA03	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	
C918	2203-000234	C-CER,CHIP;0.1nF,5%,50V,COG,TP,1005		CA04	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP,2012	
C919	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,1005		CA05	2203-000234	C-CER,CHIP;0.1nF,5%,50V,COG,TP,1005	
C920	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005		CA06	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP,2012	
C921	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012		CA07	2203-005496	C-CER,CHIP;220nF,+80-20%,10V,Y5V,TP,1005	
C922	2203-006320	C-CER,CHIP;2200nF,10%,16V,X7R,TP,2012		CA08	2203-005496	C-CER,CHIP;220nF,+80-20%,10V,Y5V,TP,1005	

Electrical Parts List

Loc.No	Part No	Description : Specification	Remark	Loc.No	Part No	Description : Specification	Remark
CA09	2404-001257	C-TA,CHIP;1UF,20%,16V,-,TP;2012		CI09	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA10	2203-000234	C-CER,CHIP;0.1nF,5%,50V,COG,TP;1005		CI10	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA11	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012		CI11	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	
CA12	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CI12	2203-006047	C-CER,CHIP;33NF,10%,16V,X7R,TP;1005	
CA13	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CI13	2203-000714	C-CER,CHIP;3.3nF,10%,50V,X7R,TP;1005,-	
CA14	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CI14	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA15	2404-001167	C-TA,CHIP;2.2uF,20%,16V,-,TP;3216		CI15	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA16	2404-000232	C-TA,CHIP;4.7uF,20%,10V,-,TP;3216		CI16	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V;1608	
CA17	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CI17	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA18	2404-001167	C-TA,CHIP;2.2uF,20%,16V,-,TP;3216		CM01	2203-001221	C-CER,CHIP;0.82NF,10%,50V,X7R,TP;1005	
CA19	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM03	2203-006006	C-CER,CHIP;0.005NF,* $\pm$ 0.25PF;50V,COG,TP;1	
CA20	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012		CM04	2203-006006	C-CER,CHIP;0.005NF,* $\pm$ 0.25PF;50V,COG,TP;1	
CA21	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM05	2203-001221	C-CER,CHIP;0.82NF,10%,50V,X7R,TP;1005	
CA22	2404-001020	C-TA,CHIP;10uF,20%,10V,GP,TP;3216		CM06	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA23	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM07	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012	
CA24	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM08	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA25	2404-001293	C-TA,CHIP;100uF,20%,6.3V,WT,TP;3528		CM09	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA26	2404-001293	C-TA,CHIP;100uF,20%,6.3V,WT,TP;3528		CM10	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA27	2203-002487	C-CER,CHIP;4.7nF,10%,25V,X7R,1005		CM102	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA28	2203-002487	C-CER,CHIP;4.7nF,10%,25V,X7R,1005		CM103	2404-001247	C-TA,CHIP;22uF,20%,4V,WT,TP;2012	
CA29	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012		CM11	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA30	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM12	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012	
CA31	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012		CM13	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA32	2404-001257	C-TA,CHIP;1UF,20%,16V,-,TP;2012		CM14	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012	
CA33	2404-001257	C-TA,CHIP;1UF,20%,16V,-,TP;2012		CM15	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA34	2203-002487	C-CER,CHIP;4.7nF,10%,25V,X7R,1005		CM16	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA35	2203-002487	C-CER,CHIP;4.7nF,10%,25V,X7R,1005		CM17	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA38	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM18	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA51	2404-001257	C-TA,CHIP;1UF,20%,16V,-,TP;2012		CM19	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CA52	2404-001257	C-TA,CHIP;1UF,20%,16V,-,TP;2012		CM20	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD01	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012		CM21	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD02	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM22	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD03	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012		CM23	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD04	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM24	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD05	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM25	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD06	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM26	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD09	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM27	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD10	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012		CM28	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD100	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM29	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD11	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM30	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD12	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM31	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD13	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM32	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD14	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM33	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD15	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM34	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD16	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM35	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD17	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM36	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012	
CD18	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM37	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD19	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM38	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD20	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM39	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD21	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM40	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD22	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM41	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD23	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM42	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD24	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM43	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD25	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM44	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD26	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM45	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD27	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM46	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD28	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM47	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CD29	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM48	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CI01	2404-001020	C-TA,CHIP;10uF,20%,10V,GP,TP;3216		CM49	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CI02	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM50	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CI03	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM51	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CI04	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,1005		CM52	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CI05	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM53	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012	
CI06	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005		CM54	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CI07	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005		CM55	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	
CI08	2203-005481	C-CER,CHIP;47nF,10%,10V,X7R,TP;1005,-		CM57	2203-006048	C-CER,CHIP;100NF,10%,10V,X7R,TP;1005	

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
CM58	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		CZ03	2404-001020	C-TA,CHIP;10uF;20%,10V,GP,TP;3216	
CM71	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		CZ04	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005	
CM72	2404-001246	C-TA,CHIP;10uF;20%,6.3V,WT,TP;2012		CZ05	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005	
CM73	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		CZ06	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005	
CM74	2404-001246	C-TA,CHIP;10uF;20%,6.3V,WT,TP;2012		CZ07	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005	
CM75	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		CZ08	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005	
CM76	2404-001246	C-TA,CHIP;10uF;20%,6.3V,WT,TP;2012		D501	0406-001084	DIODE-TVS,SMF05,6/-/-V,200W,-	
CM77	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		D502	0406-001084	DIODE-TVS,SMF05,6/-/-V,200W,-	
CM78	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		D901	0402-001324	DIODE-RECTIFIER,RB491D,25V,1A,SOT-23,TP	
CM79	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		D902	0402-001324	DIODE-RECTIFIER,RB491D,25V,1A,SOT-23,TP	
CM80	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		D904	0402-001324	DIODE-RECTIFIER,RB491D,25V,1A,SOT-23,TP	
CM81	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		D907	0401-001059	DIODE-SWITCHING;1SS362,80V,80MA,SC-75,TP	
CM82	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		D908	0403-001477	DIODE-ZENER,KDZ6.2V,5.8-6.6V,150MW,USC,T	
CM83	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		D909	0401-001059	DIODE-SWITCHING;1SS362,80V,80MA,SC-75,TP	
CM84	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		D910	0401-001059	DIODE-SWITCHING;1SS362,80V,80MA,SC-75,TP	
CM85	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		D101	0401-001054	DIODE-SWITCHING,KDS160,80V,100MA,SOD-323	
CM86	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		DM01	0401-001054	DIODE-SWITCHING,KDS160,80V,100MA,SOD-323	
CM87	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		DO01	0406-001084	DIODE-TVS,SMF05,6/-/-V,200W,-	
CM88	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		F901	3601-001378	FUSE-SURFACE MOUNT;24V,2.5A,FAST-ACTING,	
CM89	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		F902	3601-001378	FUSE-SURFACE MOUNT;24V,2.5A,FAST-ACTING,	
CM91	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC101	0801-002417	IC-CMOS LOGIC;7SHU04,INVERTER,SSOP;5P;49	
CM92	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC501	AD09-00251A	IC-MICOM;-,-----,TQFP;TR,12*1	
CM93	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC502	0801-002628	IC-CMOS LOGIC;7SZ08,2-INPUT AND GATE,SC7	
CN501	3708-001861	CONNECTOR-FPC/FFC/PIC;10P;0.5MM,SMD-A,SN		IC503	0801-002800	IC-CMOS LOGIC;NC7SV08,AND GATE,SC70;5P;4	
CN901	3711-002127	CONNECTOR-SOCKET;22P;1R,0.5mm,SMD-A,Ni,B		IC504	0801-000796	IC-CMOS LOGIC;7S32,OR GATE,SOT-353;5P;51	
CN902	3711-004642	CONNECTOR-HEADER;NO WALL,2P;1R,2.5mm,SMD-		IC505	0801-000796	IC-CMOS LOGIC;7S32,OR GATE,SOT-353;5P;51	
CN903	3711-004642	CONNECTOR-HEADER;NO WALL,2P;1R,2.5mm,SMD-		IC506	0801-002628	IC-CMOS LOGIC;7SZ08,2-INPUT AND GATE,SC7	
CNA01	3711-005090	CONNECTOR-HEADER;BOX,4P;1R,1MM,SMD-A,SN,		IC901	1203-003525	IC-DC/DC CONVERTER;MB39A108,BCC,40P;6x6mm	
CNA02	3711-005365	CONNECTOR-HEADER;BOX,2P;2R,0.8mm,SMD-A,T		IC902	1203-003449	IC-BATTERY;LTC4053EMSE,MSOP;10P;3x3mm,PL	
CND01	3708-001675	CONNECTOR-FPC/FFC/PIC;20P;0.5MM,SMD-A,SN		IC903	0505-001726	FET-SILICON;ECH8603,P,-20V,-4A,37MOHM,1.	
CNM01	3708-001942	CONNECTOR-FPC/FFC/PIC;18P;0.5mm,SMD-A,SN		IC904	0505-001726	FET-SILICON;ECH8603,P,-20V,-4A,37MOHM,1.	
CNP01	3708-001210	CONNECTOR-FPC/FFC/PIC;18P;0.5mm,SMD-S,SN		IC905	1203-002807	IC-POS;FIXED REG.;XC6413FY01MR,SOT-25;5	
CN21	3708-001571	CONNECTOR-FPC/FFC/PIC;21P;0.5mm,SMD-A,SN		IC908	0801-002417	IC-CMOS LOGIC;7SHU04,INVERTER,SSOP;5P;49	
CO01	2404-001246	C-TA,CHIP;10uF;20%,6.3V,WT,TP;2012		IC909	0801-002628	IC-CMOS LOGIC;7SZ08,2-INPUT AND GATE,SC7	
CO02	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC910	1203-002428	IC-VOL. DETECTOR;XC61CC3002NR,SSOT-24;4P	
CO05	2404-001293	C-TA,CHIP;100uF;20%,6.3V,WT,TP;3528		IC911	1203-002213	IC-VOL. DETECTOR;XC61CC2502,SSOT-24;4P	
CO06	2404-001293	C-TA,CHIP;100uF;20%,6.3V,WT,TP;3528		IC912	0801-000796	IC-CMOS LOGIC;7S32,OR GATE,SOT-353;5P;51	
CO09	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC913	0801-000796	IC-CMOS LOGIC;7S32,OR GATE,SOT-353;5P;51	
CO11	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC914	1203-002209	IC-VOL. DETECTOR;XC61CN2102NR,SSOT-24;4P	
CO12	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC915	1203-003042	IC-DC/DC CONVERTER;LT1618,MSOP;10P;3.0x3	
CO14	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC917	0801-000796	IC-CMOS LOGIC;7S32,OR GATE,SOT-353;5P;51	
CO19	2404-001020	C-TA,CHIP;10uF;20%,10V,GP,TP;3216		IC920	0505-001726	FET-SILICON;ECH8603,P,-20V,-4A,37MOHM,1.	
CO21	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608		IC930	0406-001084	DIODE-TVS,SMF05,6/-/-V,200W,-	
CP05	2404-001246	C-TA,CHIP;10uF;20%,6.3V,WT,TP;2012		IC931	0406-001084	DIODE-TVS,SMF05,6/-/-V,200W,-	
CP06	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC936	0801-002417	IC-CMOS LOGIC;7SHU04,INVERTER,SSOP;5P;49	
CP07	2404-001246	C-TA,CHIP;10uF;20%,6.3V,WT,TP;2012		IC938	1203-002037	IC-DC/DC CONVERTER;1613,SOT-23;5P;63MIL,	
CP08	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC939	0406-001084	DIODE-TVS,SMF05,6/-/-V,200W,-	
CP09	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC940	0406-001084	DIODE-TVS,SMF05,6/-/-V,200W,-	
CP10	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC941	0505-001726	FET-SILICON;ECH8603,P,-20V,-4A,37MOHM,1.	
CP11	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608		ICA01	1205-002247	IC-CODEC;AK4564VQ,LQFP;48P;7X7MM,PLASTI	
CP12	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608		ICA02	AD09-00261A	IC-MICOM;-,SPIDER,8,-----,SSOP;RE	
CP13	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608		ICD01	1204-002336	IC-ENCODER/DECODER;TW9920,TBGA,100P;8x8mm	
CP14	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		ICD70	0801-002534	IC-CMOS LOGIC;7WH74,D FLIP-FLOP;SSOP;8P	
CP15	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608		IC101	1201-001667	IC-OP AMP;12902,SSOP;TP;14P;173MIL,QUAD,	
CP16	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC102	1201-001667	IC-OP AMP;12902,SSOP;TP;14P;173MIL,QUAD,	
CP17	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		IC103	0801-000022	IC-CMOS LOGIC;7S00,NAND GATE,SOP;5P;49MI	
CP18	2404-001020	C-TA,CHIP;10uF;20%,10V,GP,TP;3216		IC104	0801-002417	IC-CMOS LOGIC;7SHU04,INVERTER,SSOP;5P;49	
CP19	2203-002793	C-CER,CHIP;1000nF,+80-20%,25V,Y5V,2012		ICM01	AD13-00028A	IC-ASIC-DSP;SSC7376,SPDIER-PJ;337,1.2V,	
CP20	2203-000812	C-CER,CHIP;0.033nF,5%,50V,C0G,1005		ICM03	0801-002628	IC-CMOS LOGIC;7SZ08,2-INPUT AND GATE,SC7	
CP21	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		ICM71	1105-001605	IC-DRAM;K4S283233F,4x1Mx32Bit,FPGA,90P	
CP22	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		ICM72	1107-001354	IC-FLASH MEMORY;39VF200A,128KX16BIT,TFBG	
CP23	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		ICM73	1107-001494	IC-FLASH MEMORY;K9W4G08U0M-PCB0;512Mx8Bit	VP-X105(L) Only
CP24	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		ICM73	1107-001526	IC-FLASH MEMORY;K9W8G08U1M,2x512Mx8/2x256	VP-X110(L) Only
CP25	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		ICO01	1201-002148	IC-VIDEO AMP;NJM2561F1,MTP;6P2,9x1.6mm,	
CZ01	2404-001246	C-TA,CHIP;10uF;20%,6.3V,WT,TP;2012		ICO03	1001-001287	IC-VIDEO SWITCH;-,TSSOP;16P;5x6,4x1.1m	
CZ02	2203-006048	C-CER,CHIP;100NF;10%,10V,X7R,TP;1005		ICO04	1001-001287	IC-VIDEO SWITCH;-,TSSOP;16P;5x6,4x1.1m	

Electrical Parts List

Loc.No	Part No	Description ; Specification	Remark
ICP01	1002-001270	IC-A/D CONVERTER,TLV990BPFB,10,TQFP,48P,	
ICZ01	1003-001530	IC-MOTOR DRIVER,UPD16877MA-6A5,TSSOP,24P	
J001	3722-002179	JACK-EAR PHONE;SP/AC,-,AU30U,BLK,-	
L902	2703-002768	INDUCTOR-SMD;10uH,20%,2826	
L903	2703-002768	INDUCTOR-SMD;10uH,20%,2826	
L904	2703-002766	INDUCTOR-SMD;10uH,20%,3735	
L905	2703-002766	INDUCTOR-SMD;10uH,20%,3735	
L906	2703-002766	INDUCTOR-SMD;10uH,20%,3735	
L907	2703-002766	INDUCTOR-SMD;10uH,20%,3735	
L908	2703-000397	INDUCTOR-SMD;33uH,10%,2520	
L909	2703-000397	INDUCTOR-SMD;33uH,10%,2520	
L910	2703-000397	INDUCTOR-SMD;33uH,10%,2520	
L911	2703-002766	INDUCTOR-SMD;10uH,20%,3735	
L913	2703-002766	INDUCTOR-SMD;10uH,20%,3735	
LA01	2703-000397	INDUCTOR-SMD;33uH,10%,2520	
LA02	2703-000187	INDUCTOR-SMD;3.3uH,5%,2520	
LA03	2703-000397	INDUCTOR-SMD;33uH,10%,2520	
LA04	2703-001863	INDUCTOR-SMD;6.8uH,20%,2520	
LA05	2703-000397	INDUCTOR-SMD;33uH,10%,2520	
LEDM01	0601-001937	LED;SMD(SIDE VIEW);RED,1.6x0.55x1.	
LI01	2703-002174	INDUCTOR-SMD;10uH,10%,2520	
LP03	2703-002174	INDUCTOR-SMD;10uH,10%,2520	
LP04	2703-002174	INDUCTOR-SMD;10uH,10%,2520	
LZ01	2703-002174	INDUCTOR-SMD;10uH,10%,2520	
LZ02	2703-002174	INDUCTOR-SMD;10uH,10%,2520	
Q501	0504-001154	TR-DIGITAL;SRA2205E,P,NP,150MW,2.2K/47KOH	
Q502	0504-001154	TR-DIGITAL;SRA2205E,P,NP,150MW,2.2K/47KOH	
Q503	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q901	0505-001725	FET-SILICON;MCH5818,P,-12V,-1.5A,200MOHM	
Q902	0505-001725	FET-SILICON;MCH5818,P,-12V,-1.5A,200MOHM	
Q903	0505-001725	FET-SILICON;MCH5818,P,-12V,-1.5A,200MOHM	
Q904	0505-001646	FET-SILICON;MCH5803,N,30V,1.4A,370MOHM,0	
Q905	0505-001646	FET-SILICON;MCH5803,N,30V,1.4A,370MOHM,0	
Q906	0506-001066	TR-ARRAY;UMF5,NPN/PNP,2,150mW,SC-88,TP,	
Q907	0506-001066	TR-ARRAY;UMF5,NPN/PNP,2,150mW,SC-88,TP,	
Q908	0506-001066	TR-ARRAY;UMF5,NPN/PNP,2,150mW,SC-88,TP,	
Q909	0506-001066	TR-ARRAY;UMF5,NPN/PNP,2,150mW,SC-88,TP,	
Q910	0506-001066	TR-ARRAY;UMF5,NPN/PNP,2,150mW,SC-88,TP,	
Q911	0506-001066	TR-ARRAY;UMF5,NPN/PNP,2,150mW,SC-88,TP,	
Q912	0505-001892	FET-SILICON;Si1023X,P,-20V,-390mA,0.7ohm	
Q913	0505-001893	FET-SILICON;Si1024X,N,20V,515mA,0.7ohm,0	
Q914	0506-001066	TR-ARRAY;UMF5,NPN/PNP,2,150mW,SC-88,TP,	
Q915	0501-002373	TR-SMALL SIGNAL;EMX2,NPN,150MW,EMT6,TP,1	
Q916	0506-001066	TR-ARRAY;UMF5,NPN/PNP,2,150mW,SC-88,TP,	
Q918	0505-001893	FET-SILICON;Si1024X,N,20V,515mA,0.7ohm,0	
Q919	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q920	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q921	0505-001893	FET-SILICON;Si1024X,N,20V,515mA,0.7ohm,0	
Q923	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q924	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q926	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q927	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q929	0505-001893	FET-SILICON;Si1024X,N,20V,515mA,0.7ohm,0	
Q932	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q933	0504-001102	TR-DIGITAL;EMD3,NPN/PNP,150MW,10K/10K,EM	
Q934	0504-001102	TR-DIGITAL;EMD3,NPN/PNP,150MW,10K/10K,EM	
Q935	0504-001102	TR-DIGITAL;EMD3,NPN/PNP,150MW,10K/10K,EM	
Q936	0504-001102	TR-DIGITAL;EMD3,NPN/PNP,150MW,10K/10K,EM	
Q937	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q938	0506-001066	TR-ARRAY;UMF5,NPN/PNP,2,150mW,SC-88,TP,	
Q939	0504-000168	TR-DIGITAL;RN1104,NPN,100MW,47K/47K,SSM,	
Q101	0501-000225	TR-SMALL SIGNAL;2SC4617,NPN,200mW,EM3,TP	
Q102	0501-000225	TR-SMALL SIGNAL;2SC4617,NPN,200mW,EM3,TP	
Q103	0504-001025	TR-DIGITAL;DTC143EE,NPN,150MW,4.7K,EMT3,	
Q104	0501-000552	TR-SMALL SIGNAL;2SA1774-Q,P,NP,150mW,EM3,	
Q105	0501-000225	TR-SMALL SIGNAL;2SC4617,NPN,200mW,EM3,TP	

Loc.No	Part No	Description ; Specification	Remark
Q106	0501-000552	TR-SMALL SIGNAL;2SA1774-Q,P,NP,150mW,EM3,	
Q107	0501-000225	TR-SMALL SIGNAL;2SC4617,NPN,200mW,EM3,TP	
Q101	0504-001025	TR-DIGITAL;DTC143EE,NPN,150MW,4.7K,EMT3,	
Q001	0505-001893	FET-SILICON;Si1024X,N,20V,515mA,0.7ohm,0	
Q002	0501-000225	TR-SMALL SIGNAL;2SC4617,NPN,200mW,EM3,TP	
Q0101	0505-001893	FET-SILICON;Si1024X,N,20V,515mA,0.7ohm,0	
Q0103	0501-000225	TR-SMALL SIGNAL;2SC4617,NPN,200mW,EM3,TP	
R1GB	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	VP-X110(L) Only
R507	2007-001305	R-CHIP;120OHM,5%,1/16W,TP,1005	
R508	2007-001305	R-CHIP;120OHM,5%,1/16W,TP,1005	
R509	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
R510	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R511	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R512	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R512M	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	VP-X105(L) Only
R513	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R515	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R516	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R518	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R520	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R523	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R525	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R533	2007-001333	R-CHIP;18KOHM,5%,1/16W,TP,1005	
R535	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R536	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R537	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R538	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R539	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R542	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R543	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R547	2007-000168	R-CHIP;470KOHM,5%,1/16W,TP,1005	
R549	2007-000168	R-CHIP;470KOHM,5%,1/16W,TP,1005	
R552	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R554	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R555	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R556	2007-000168	R-CHIP;470KOHM,5%,1/16W,TP,1005	
R558	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R559	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R568	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	
R569	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R570	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R571	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R9001	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R9002	2007-000168	R-CHIP;470KOHM,5%,1/16W,TP,1005	
R9003	2007-000168	R-CHIP;470KOHM,5%,1/16W,TP,1005	
R9004	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R9005	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
R9006	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	
R9007	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	
R9008	2007-000168	R-CHIP;470KOHM,5%,1/16W,TP,1005	
R9009	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R901	2007-007318	R-CHIP;1Kohm,1%,1/16W,TP,1005	
R9010	2007-007538	R-CHIP;56Kohm,1%,1/16W,TP,1005	
R9011	2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005	
R9012	2007-008746	R-CHIP;0.1ohm,5%,1/4W,TP,2012	
R9013	2007-007573	R-CHIP;330Kohm,1%,1/16W,TP,1005	
R9014	2007-007538	R-CHIP;56Kohm,1%,1/16W,TP,1005	
R9015	2007-000137	R-CHIP;2KOHM,5%,1/16W,TP,1005	
R9016	2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005	
R9017	2007-000566	R-CHIP;220KOHM,5%,1/16W,TP,1005	
R9018	2007-007573	R-CHIP;330Kohm,1%,1/16W,TP,1005	
R902	2007-008275	R-CHIP;30Kohm,1%,1/16W,TP,1005	
R9022	2007-007138	R-CHIP;27KOHM,1%,1/16W,TP,1005	
R9023	2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005	
R9024	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
R9025	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
R9026	2007-001319	R-CHIP;1.2KOHM,5%,1/16W,TP,1005		R975	2007-000170	R-CHIP;1MOHM,5%,1/16W,TP,1005	
R9028	2007-000170	R-CHIP;1MOHM,5%,1/16W,TP,1005		R976	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R903	2007-008275	R-CHIP;30Kohm,1%,1/16W,TP,1005		R978	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R904	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		R979	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R905	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		R980	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
R906	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		R981	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
R907	2007-007309	R-CHIP;12Kohm,1%,1/16W,TP,1005		R983	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
R908	2007-008417	R-CHIP;34KOHM,1%,1/16W,DA,TP,1005		R984	2007-007588	R-CHIP;1.8KOHM,1%,1/16W,TP,1005	
R909	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		R985	2007-007132	R-CHIP;15Kohm,1%,1/16W,TP,1005	
R910	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005		R986	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	
R911	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		R995	2007-000170	R-CHIP;1MOHM,5%,1/16W,TP,1005	
R913	2007-007588	R-CHIP;1.8KOHM,1%,1/16W,TP,1005		R996	2007-000170	R-CHIP;1MOHM,5%,1/16W,TP,1005	
R914	2007-007138	R-CHIP;27KOHM,1%,1/16W,TP,1005		R997	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	
R915	2007-007312	R-CHIP;20Kohm,1%,1/16W,TP,1005		R998	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R916	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		R999	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R917	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		RA01	2007-002797	R-CHIP;560OHM,5%,1/16W,TP,1005	
R920	2007-007588	R-CHIP;1.8KOHM,1%,1/16W,TP,1005		RA02	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R921	2007-007138	R-CHIP;27KOHM,1%,1/16W,TP,1005		RA03	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	
R922	2007-007312	R-CHIP;20Kohm,1%,1/16W,TP,1005		RA04	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	
R923	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		RA05	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R924	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005		RA06	2007-002797	R-CHIP;560OHM,5%,1/16W,TP,1005	
R927	2007-007310	R-CHIP;8.2KOHM,1%,1/16W,TP,1005		RA07	2007-003006	R-CHIP;16OHM,5%,1/16W,DA,TP,1005	
R928	2007-008275	R-CHIP;30Kohm,1%,1/16W,TP,1005		RA08	2007-003006	R-CHIP;16OHM,5%,1/16W,DA,TP,1005	
R929	2007-007131	R-CHIP;13KOHM,1%,1/16W,TP,1005		RA09	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	
R930	2007-000152	R-CHIP;20KOHM,5%,1/16W,TP,1005		RA10	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	
R931	2007-000152	R-CHIP;20KOHM,5%,1/16W,TP,1005		RA11	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R934	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		RA12	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R935	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		RA14	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
R936	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		RA15	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
R937	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		RA16	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
R938	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		RA18	2007-000932	R-CHIP;470OHM,5%,1/16W,TP,1005	
R939	2007-007313	R-CHIP;6.8KOHM,1%,1/16W,TP,1005		RA19	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R940	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		RA24	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R941	2007-008354	R-CHIP;220KOHM,1%,1/16W,TP,1005		RA25	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
R942	2007-007318	R-CHIP;1Kohm,1%,1/16W,TP,1005		RA26	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
R943	2007-007312	R-CHIP;20Kohm,1%,1/16W,TP,1005		RA27	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R944	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		RA28	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R945	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		RA51	2007-000982	R-CHIP;5.6KOHM,5%,1/16W,TP,1005	
R946	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		RA52	2007-000982	R-CHIP;5.6KOHM,5%,1/16W,TP,1005	
R947	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005		RA53	2007-000982	R-CHIP;5.6KOHM,5%,1/16W,TP,1005	
R948	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005		RA54	2007-000982	R-CHIP;5.6KOHM,5%,1/16W,TP,1005	
R949	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005		RA57	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R950	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005		RA58	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R951	2007-0001319	R-CHIP;1.2KOHM,5%,1/16W,TP,1005		RA59	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R952	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005		RA60	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R953	2007-0001319	R-CHIP;1.2KOHM,5%,1/16W,TP,1005		RA64	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R954	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005		RA65	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R955	2007-0001319	R-CHIP;1.2KOHM,5%,1/16W,TP,1005		RA68	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R956	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005		RD01	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R957	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005		RD04	2007-000242	R-CHIP;1.5KOHM,5%,1/16W,TP,1005	
R958	2007-0001319	R-CHIP;1.2KOHM,5%,1/16W,TP,1005		RD05	2007-000242	R-CHIP;1.5KOHM,5%,1/16W,TP,1005	
R959	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005		RD06	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R960	2007-0001319	R-CHIP;1.2KOHM,5%,1/16W,TP,1005		RD100	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R961	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005		RD101	2007-000173	R-CHIP;220OHM,5%,1/16W,TP,1005	
R962	2007-0001319	R-CHIP;1.2KOHM,5%,1/16W,TP,1005		RD13	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R963	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005		RD14	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R965	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005		RD15	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R966	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005		RD16	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R967	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		RD18	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	
R968	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005		RD20	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R969	2007-0001319	R-CHIP;1.2KOHM,5%,1/16W,TP,1005		RI01	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	
R970	2007-000161	R-CHIP;82KOHM,5%,1/16W,TP,1005		RI02	2007-000636	R-CHIP;270KOHM,5%,1/16W,TP,1005	
R971	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005		RI03	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
R972	2007-008354	R-CHIP;220KOHM,1%,1/16W,TP,1005		RI04	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	
R973	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005		RI05	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
R974	2007-0001319	R-CHIP;1.2KOHM,5%,1/16W,TP,1005		RI06	2007-0001313	R-CHIP;330OHM,5%,1/16W,TP,1005	

Loc.No	Part No	Description : Specification	Remark	Loc.No	Part No	Description : Specification	Remark
RI07	2007-000153	R-CHIP,22KOHM,5%,1/16W,TP,1005		RM42	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005	
RI08	2007-007309	R-CHIP,12Kohm,1%,1/16W,TP,1005		RM43	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005	
RI09	2007-007138	R-CHIP,27KOHM,1%,1/16W,TP,1005		RM44	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI10	2007-000775	R-CHIP,33KOHM,5%,1/16W,TP,1005		RM46	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI11	2007-000142	R-CHIP,2.7KOHM,5%,1/16W,TP,1005		RM48	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI12	2007-000164	R-CHIP,150KOHM,5%,1/16W,TP,1005		RM50	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI13	2007-000566	R-CHIP,220KOHM,5%,1/16W,TP,1005		RM52	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RI14	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005		RM53	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RI15	2007-000156	R-CHIP,30Kohm,5%,1/16W,TP,1005		RM57	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RI16	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005		RM58	2007-001313	R-CHIP,330OHM,5%,1/16W,TP,1005	
RI17	2007-000157	R-CHIP,47Kohm,5%,1/16W,TP,1005		RM59	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005	
RI18	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005		RM60	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005	
RI19	2007-001325	R-CHIP,3.3Kohm,5%,1/16W,TP,1005		RM61	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005	
RI20	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005		RM62	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005	
RI21	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005		RM63	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005	
RI22	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005		RM66	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RI23	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005		RM67	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI24	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005		RM68	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI25	2007-001292	R-CHIP,33OHM,5%,1/16W,TP,1005		RM69	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI26	2007-001307	R-CHIP,180OHM,5%,1/16W,TP,1005		RM70	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI27	2007-001307	R-CHIP,180OHM,5%,1/16W,TP,1005		RM76	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RI28	2007-000159	R-CHIP,56Kohm,5%,1/16W,TP,1005		RM77	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	VP-X110(L) Only
RI29	2007-000159	R-CHIP,56Kohm,5%,1/16W,TP,1005		RM78	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI30	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005		RM79	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI31	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005		RM80	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	VP-X110(L) Only
RI32	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005		RM82	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RI33	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005		RM83	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI34	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005		RM84	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RI35	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005		RM85	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RM01	2007-000172	R-CHIP,10ohm,5%,1/16W,TP,1005		RM86	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RM02	2007-000172	R-CHIP,10ohm,5%,1/16W,TP,1005		RM87	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RM03	2007-000172	R-CHIP,10ohm,5%,1/16W,TP,1005		RM88	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RM04	2007-003112	R-CHIP,27OHM,5%,1/16W,TP,1005		RM89	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RM05	2007-003112	R-CHIP,27OHM,5%,1/16W,TP,1005		RM90	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RM06	2007-003112	R-CHIP,27OHM,5%,1/16W,TP,1005		RM91	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RM07	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RM92	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RM09	2007-000138	R-CHIP,100ohm,5%,1/16W,TP,1005		RM93	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	VP-X110(L) Only
RM100	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RM94	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	VP-X110(L) Only
RM11	2007-000140	R-CHIP,1Kohm,5%,1/16W,TP,1005		RM95	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RM112	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RMA01	2011-001473	R-NETWORK,47ohm,5%,0.031W,L,CHIP,8P,TP,2	
RM113	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RMA02	2011-001473	R-NETWORK,47ohm,5%,0.031W,L,CHIP,8P,TP,2	
RM114	2007-000140	R-CHIP,1Kohm,5%,1/16W,TP,1005		RMA03	2011-001473	R-NETWORK,47ohm,5%,0.031W,L,CHIP,8P,TP,2	
RM115	2007-000140	R-CHIP,1Kohm,5%,1/16W,TP,1005		RMA04	2011-001473	R-NETWORK,47ohm,5%,0.031W,L,CHIP,8P,TP,2	
RM116	2007-000140	R-CHIP,1Kohm,5%,1/16W,TP,1005		RMA05	2011-001473	R-NETWORK,47ohm,5%,0.031W,L,CHIP,8P,TP,2	
RM117	2007-000140	R-CHIP,1Kohm,5%,1/16W,TP,1005		RMA06	2011-001473	R-NETWORK,47ohm,5%,0.031W,L,CHIP,8P,TP,2	
RM118	2007-000140	R-CHIP,1Kohm,5%,1/16W,TP,1005		RMA07	2011-001473	R-NETWORK,47ohm,5%,0.031W,L,CHIP,8P,TP,2	
RM119	2007-000140	R-CHIP,1Kohm,5%,1/16W,TP,1005		RMA08	2011-001473	R-NETWORK,47ohm,5%,0.031W,L,CHIP,8P,TP,2	
RM12	2007-000174	R-CHIP,47ohm,5%,1/16W,TP,1005		RO02	2007-007306	R-CHIP,100OHM,1%,1/16W,TP,1005	
RM120	2007-000140	R-CHIP,1Kohm,5%,1/16W,TP,1005		RO06	2007-007009	R-CHIP,75ohm,5%,1/16W,TP,1005	
RM121	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005		RO101	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005	
RM15	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005		RO102	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005	
RM17	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005		RO103	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RM19	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005		RO105	2007-000143	R-CHIP,4.7Kohm,5%,1/16W,TP,1005	
RM22	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RO106	2007-007321	R-CHIP,68OHM,1%,1/16W,TP,1005	
RM24	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RO12	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	
RM25	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RO14	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RM26	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RO15	2007-000152	R-CHIP,20KOHM,5%,1/16W,TP,1005	
RM27	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005		RO16	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RM28	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RO17	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RM29	2007-007313	R-CHIP,6.8KOHM,1%,1/16W,TP,1005		RP01	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RM30	2007-007313	R-CHIP,6.8KOHM,1%,1/16W,TP,1005		RP02	2007-000162	R-CHIP,100Kohm,5%,1/16W,TP,1005	
RM31	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RP03	2007-000083	R-CHIP,3Kohm,5%,1/10W,TP,1608	
RM35	2007-000172	R-CHIP,10ohm,5%,1/16W,TP,1005		RP04	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005	
RM37	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RP05	2007-000164	R-CHIP,150KOHM,5%,1/16W,TP,1005	
RM39	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005		RP06	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005	
RM41	2007-000148	R-CHIP,10Kohm,5%,1/16W,TP,1005		RPAL	2007-000171	R-CHIP,0ohm,5%,1/16W,TP,1005	

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
X501	2801-003856	CRYSTAL-SMD;0.032768MHz,20ppm,28-ACR,7pF		CL28	2203-000783	C-CER,CHIP;0.33nF,5%,50V,COG,TP;1608	
X502	2801-004364	CRYSTAL-SMD;8.38MHz,50ppm,-,12.0 pF,200o		CL29	2203-000783	C-CER,CHIP;0.33nF,5%,50V,COG,TP;1608	
XM01	2804-001309	OSCILLATOR-CLOCK;54MHZ,20PPM,10TTL & CMO		CL30	2203-000783	C-CER,CHIP;0.33nF,5%,50V,COG,TP;1608	
XM02	2801-003827	CRYSTAL-SMD;48MHz,30PPM,28-ACI,7PF,1500H		CL31	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608	
				CL33	2203-005923	C-CER,CHIP;1000nF,20%,6.3V,X5R,TP;1608	
				CNL01	3708-001069	CONNECTOR-FPC/FFC/PIC;20P,0.5mm,SMD-A,SN	
				CNL02	3708-001647	CONNECTOR-FPC/FFC/PIC;24P,0.5MM,SMD-A,-	
				CNL03	3711-005365	CONNECTOR-HEADER;BOX,2P2R,0.8mm,SMD-A,T	
P002	AD97-09277A	ASSY-CCD BOARD;SPIDER-PJ,VP-M102,PAL		DLO1	0403-001422	DIODE-ZENER,KDZ4.3V,4-4.5V,150mW,SOD-323	
C594	AD61-018349	PLATE-CCD;SPIDER,Cu C1100,T1.0,W17.2,L20		DLO2	0403-001421	DIODE-ZENER,KDZ2.7V,2.5-2.9V,150mW,SOD-3	
C607	0605-001097	CCD;COLOR/PAL,SOP;14P;8.2x8.2x2.4mm		DLO3	0406-001084	DIODE-TVS;SMF05.6/-V,200W,-	
CC01	2404-000335	C-TA,CHIP;3.3uF,20%,16V,GP,TP;3216		ICL01	1003-001536	IC-LCD DRIVER;CXM3004R,LQFP48P,-,SINGLE	
CC02	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,TP;1608,-		ICL02	1103-001133	IC-EEPROM;24C020,256x8,SOP8P;5.13x3.95mm	
CC03	2203-000491	C-CER,CHIP;2.2nF,10%,50V,X7R,TP;1608,-		LL06	2703-001239	INDUCTOR-SMD;3.3uH,10%,1608	
CC04	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP;1608		LL07	2703-001239	INDUCTOR-SMD;3.3uH,10%,1608	
CC05	2404-000157	C-TA,CHIP;1uF,20%,35V,-,TP;3216		LL08	2703-001239	INDUCTOR-SMD;3.3uH,10%,1608	
CC06	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP;1608		QL01	0506-001066	TR-ARRAY;UMF5,NPN/PNP;2,150mW,SC-88,TP;	
CC07	2404-000157	C-TA,CHIP;1uF,20%,35V,-,TP;3216		RL01	2007-000309	R-CHIP;10ohm,5%,1/10W,TP;1608	
CC08	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP;1608		RL02	2007-000309	R-CHIP;10ohm,5%,1/10W,TP;1608	
CC09	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP;1608		RL03	2007-000309	R-CHIP;10ohm,5%,1/10W,TP;1608	
CNC01	3708-001985	CONNECTOR-FPC/FFC/PIC;19P,0.3mm,SMD-A,AU		RL04	2007-000309	R-CHIP;10ohm,5%,1/10W,TP;1608	
DC01	0401-001054	DIODE-SWITCHING;KDS160,80V,100MA,SOD-323		RL05	2007-000309	R-CHIP;10ohm,5%,1/10W,TP;1608	
FCCD	AD41-00639A	FPC-CCD;SPIDER-PJ,MAIN-CCD 00,PE,19P-1		RL09	2007-001131	R-CHIP;68ohm,1%,1/10W,TP;1608	
ICC02	1003-001065	IC-CLOCK DRIVER;KS7221D,SOP,20P,225MIL,Q		RL10	2007-001214	R-CHIP;82ohm,1%,1/10W,TP;1608	
LC01	2703-001883	INDUCTOR-SMD;22uH,10%,2520		RL11	2007-001164	R-CHIP;75ohm,1%,1/10W,TP;1608	
LC02	2703-001883	INDUCTOR-SMD;22uH,10%,2520		RL13	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	
PCCD	AD41-00638A	PCB-CCD ARRAY;SPIDER-PJ,FR-4,4L,00.0.8t;		RL14	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP;1608	
QC01	0505-000180	FET-SILICON;2SK1070,N,-,50mA,-,150mW,SOT		RL15	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	
RC01	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608		RL19	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	
RC02	2007-000072	R-CHIP;47ohm,5%,1/10W,TP;1608		RL20	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	
RC03	2007-000083	R-CHIP;3Kohm,5%,1/10W,TP;1608		RL21	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	
				RL22	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	
				RL24	2007-000583	R-CHIP;22Kohm,1%,1/10W,TP;1608	
				RL25	2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP;1608	
				RL26	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP;1608	
				RL27	2007-001167	R-CHIP;75ohm,5%,1/10W,TP;1608	
				SWL01	3404-001185	SWITCH-TACT;12V,50MA,80GF,4.4X3.55X1.5MM	
L004	AD97-09283B	ASSY-LCD BOARD;SPIDER X-PJ,SC-M105/XAA,2		P143	AD97-09688A	ASSY-FPC LEFT;FPC;SPIDER-PJ,LEFT KEY, 18	
BL01	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		CE01	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	
BL02	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		CE02	2203-005061	C-CER,CHIP;100nF,+80-20%,16V,Y5V,1005	
BL03	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		CE03	2203-005496	C-CER,CHIP;220nF,+80-20%,10V,Y5V,TP;1005	
BL04	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		CE04	2203-002759	C-CER,CHIP;15nF,+80-20%,50V,Y5V,TP;1005,	
BL05	3301-001158	BEAD-SMD;30ohm,1608,1000mA,TP,40.4ohm/		CE05	2404-001250	C-TA,CHIP;47uF,20%,4V,-,TP;3216	
CL01	2404-001269	C-TA,CHIP;10uF,20%,20V,-,TP;3528		CE06	2203-005061	C-CER,CHIP;100nF,+80-20%,16V,Y5V,1005	
CL02	2203-005887	C-CER,CHIP;680nF,+80-20%,10V,Y5V,TP;1608		CE07	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012	
CL03	2203-005887	C-CER,CHIP;680nF,+80-20%,10V,Y5V,TP;1608		CE08	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	
CL04	2203-005887	C-CER,CHIP;680nF,+80-20%,10V,Y5V,TP;1608		CE09	2203-005061	C-CER,CHIP;100nF,+80-20%,16V,Y5V,1005	
CL05	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608		CE10	2203-005496	C-CER,CHIP;220nF,+80-20%,10V,Y5V,TP;1005	
CL06	2404-000212	C-TA,CHIP;3.3uF,20%,25V,-,TP;3528		CE11	2203-002759	C-CER,CHIP;15nF,+80-20%,50V,Y5V,TP;1005,	
CL07	2203-005887	C-CER,CHIP;680nF,+80-20%,10V,Y5V,TP;1608		CE12	2404-001250	C-TA,CHIP;47uF,20%,4V,-,TP;3216	
CL08	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,TP;1608		CE13	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012	
CL09	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608		CE14	2203-005061	C-CER,CHIP;100nF,+80-20%,16V,Y5V,1005	
CL10	2404-001020	C-TA,CHIP;10uF,20%,10V,GP,TP;3216		CE15	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	
CL11	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608		CE16	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012	
CL12	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608		CE17	2203-005509	C-CER,CHIP;330nF,+80-20%,10V,Y5V,TP;1005	
CL13	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608		CE18	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,1005	
CL14	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,TP;1608		CE19	2203-005061	C-CER,CHIP;100nF,+80-20%,16V,Y5V,1005	
CL15	2404-000335	C-TA,CHIP;3.3uF,20%,16V,GP,TP;3216		CE20	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,1005	
CL16	2203-001103	C-CER,CHIP;6.8nF,10%,50V,X7R,TP;1608,-		CE21	2203-005509	C-CER,CHIP;330nF,+80-20%,10V,Y5V,TP;1005	
CL17	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608		CE22	2404-001246	C-TA,CHIP;10uF,20%,6.3V,WT,TP;2012	
CL18	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608		CE23	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	
CL19	2404-001020	C-TA,CHIP;10uF,20%,10V,GP,TP;3216		CE25	2203-005061	C-CER,CHIP;100nF,+80-20%,16V,Y5V,1005	
CL20	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608		CE26	2203-005061	C-CER,CHIP;100nF,+80-20%,16V,Y5V,1005	
CL21	2203-005923	C-CER,CHIP;1000nF,20%,6.3V,X5R,TP;1608					
CL22	2203-005923	C-CER,CHIP;1000nF,20%,6.3V,X5R,TP;1608					
CL23	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,TP;1608					
CL24	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,TP;1608					
CL25	2203-000783	C-CER,CHIP;0.33nF,5%,50V,COG,TP;1608					
CL26	2203-000783	C-CER,CHIP;0.33nF,5%,50V,COG,TP;1608					
CL27	2203-000783	C-CER,CHIP;0.33nF,5%,50V,COG,TP;1608					

Electrical Parts List

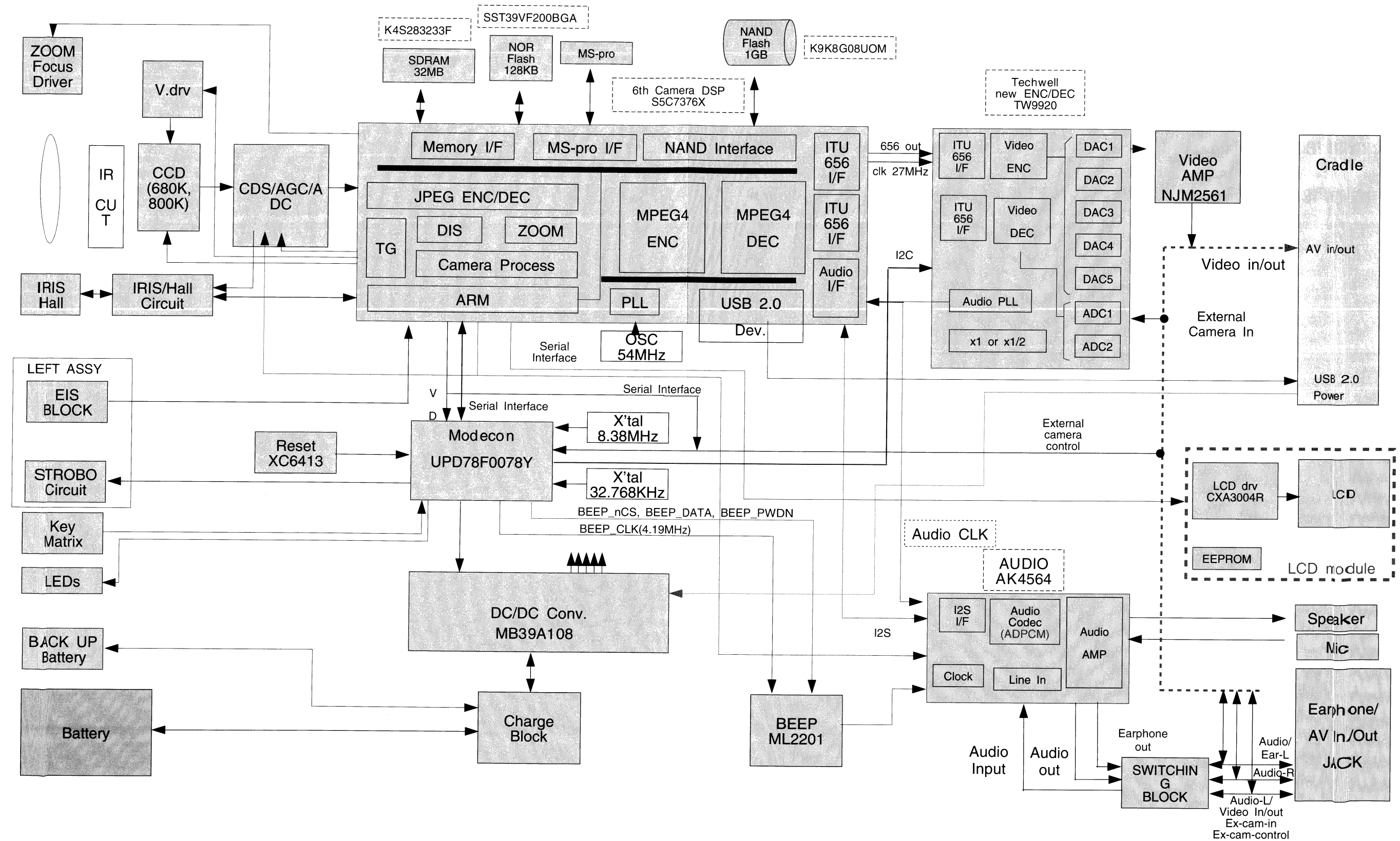
Loc.No	Part No	Description ; Specification	Remark
CE27	2404-001250	C-TA,CHIP;47uF,20%,4V,-,TP,3216	
CE28	2404-001250	C-TA,CHIP;47uF,20%,4V,-,TP,3216	
CE29	2203-001405	C-CER,CHIP;22nF,+80-20%,25V,Y5V,TP,1005	
CE30	2203-001405	C-CER,CHIP;22nF,+80-20%,25V,Y5V,TP,1005	
CE31	2203-005061	C-CER,CHIP;100nF,+80-20%,16V,Y5V,1005	
CNK02	3709-001297	CONNECTOR-CARD EDGE;10P;1.5mm,SMD-A,SUS	
DK01	0406-001084	DIODE-TVS;SMF05.6/-V,200W,-	
FPLF	AD41-00648A	FPC-LEFT;SPIDER-PJ,LEFT 01,PE,14P;0.6mm	
ICE01	AD32-00026A	SENSOR-GYRO;XV-3500CB,SPIDER,-20-80,2.7~	
ICE02	AD32-00026A	SENSOR-GYRO;XV-3500CB,SPIDER,-20-80,2.7~	
ICE03	1201-001376	IC-OP AMP;75W01,SSOP;8P;110MIL,DUAL,-,PL	
ICE04	1201-001193	IC-OP AMP;2112,SOP;TP;14P;173MIL,QUAD,10	
LE01	2703-001883	INDUCTOR-SMD;22uH,10%,2520	
LEDK01	0601-001953	LED;SMD,WHIT,11.5x3.2x8.66mm,-,11.5	
OE01	0501-002128	TR-SMALL SIGNAL;KTC4075,NPN,100mW,USM,TP	
OE02	0501-002128	TR-SMALL SIGNAL;KTC4075,NPN,100mW,USM,TP	
OE03	0504-001032	TR-DIGITAL;KRC404,NPN,100MW,47K/47K,SOT-	
RE01	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
RE02	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
RE03	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
RE04	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
RE05	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	
RE06	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
RE07	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
RE08	2007-000153	R-CHIP;22KOHM,5%,1/16W,TP,1005	
RE09	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
RE10	2007-007946	R-CHIP;470Kohm,1%,1/16W,TP,1005	
RE11	2007-007946	R-CHIP;470Kohm,1%,1/16W,TP,1005	
RE12	2007-007946	R-CHIP;470Kohm,1%,1/16W,TP,1005	
RE13	2007-007946	R-CHIP;470Kohm,1%,1/16W,TP,1005	
RE14	2007-000151	R-CHIP;15KOHM,5%,1/16W,TP,1005	
RE15	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
RE16	2007-001025	R-CHIP;560KOHM,5%,1/16W,TP,1005	
RE17	2007-000168	R-CHIP;470KOHM,5%,1/16W,TP,1005	
RE18	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	
RE19	2007-000151	R-CHIP;15KOHM,5%,1/16W,TP,1005	
RE20	2007-001025	R-CHIP;560KOHM,5%,1/16W,TP,1005	
RE21	2007-000168	R-CHIP;470KOHM,5%,1/16W,TP,1005	
RE25	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
RE26	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
RE27	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
RE28	2007-000139	R-CHIP;220OHM,5%,1/16W,TP,1005	
RE29	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	
RK01	2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	
RK02	2007-000092	R-CHIP;15Kohm,5%,1/10W,TP,1608	
RK03	2007-000130	R-CHIP;39Kohm,5%,1/10W,TP,1608	
SWK01	3404-001200	SWITCH-TACT;12V DC,50MA,160GF;3.9X2.9X2M	
SWK02	3404-001200	SWITCH-TACT;12V DC,50MA,160GF;3.9X2.9X2M	
SWK03	3409-001176	SWITCH-DETECTOR;5V,1mA,1.0.4gf,PUSH	
SWK04	3409-001078	SWITCH-SLIDE;5V DC,0.3A,DSDP;OFF<ON>,SS	

Loc.No	Part No	Description ; Specification	Remark
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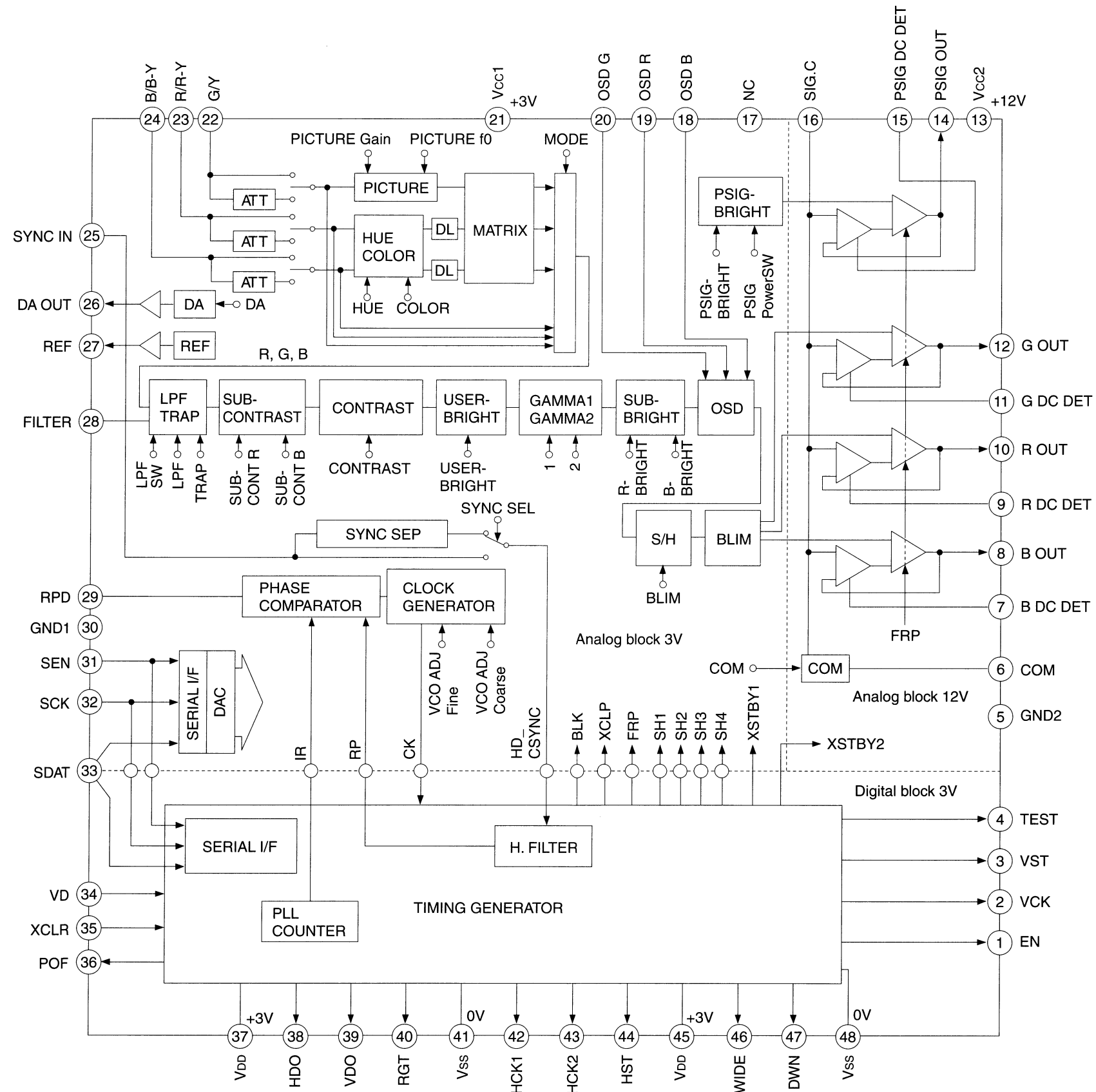
7. Block Diagrams

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7-3 ICA01 IC Block Diagram - - - - -	7-4
7-4 ICM01 IC Block Diagram - - - - -	7-5

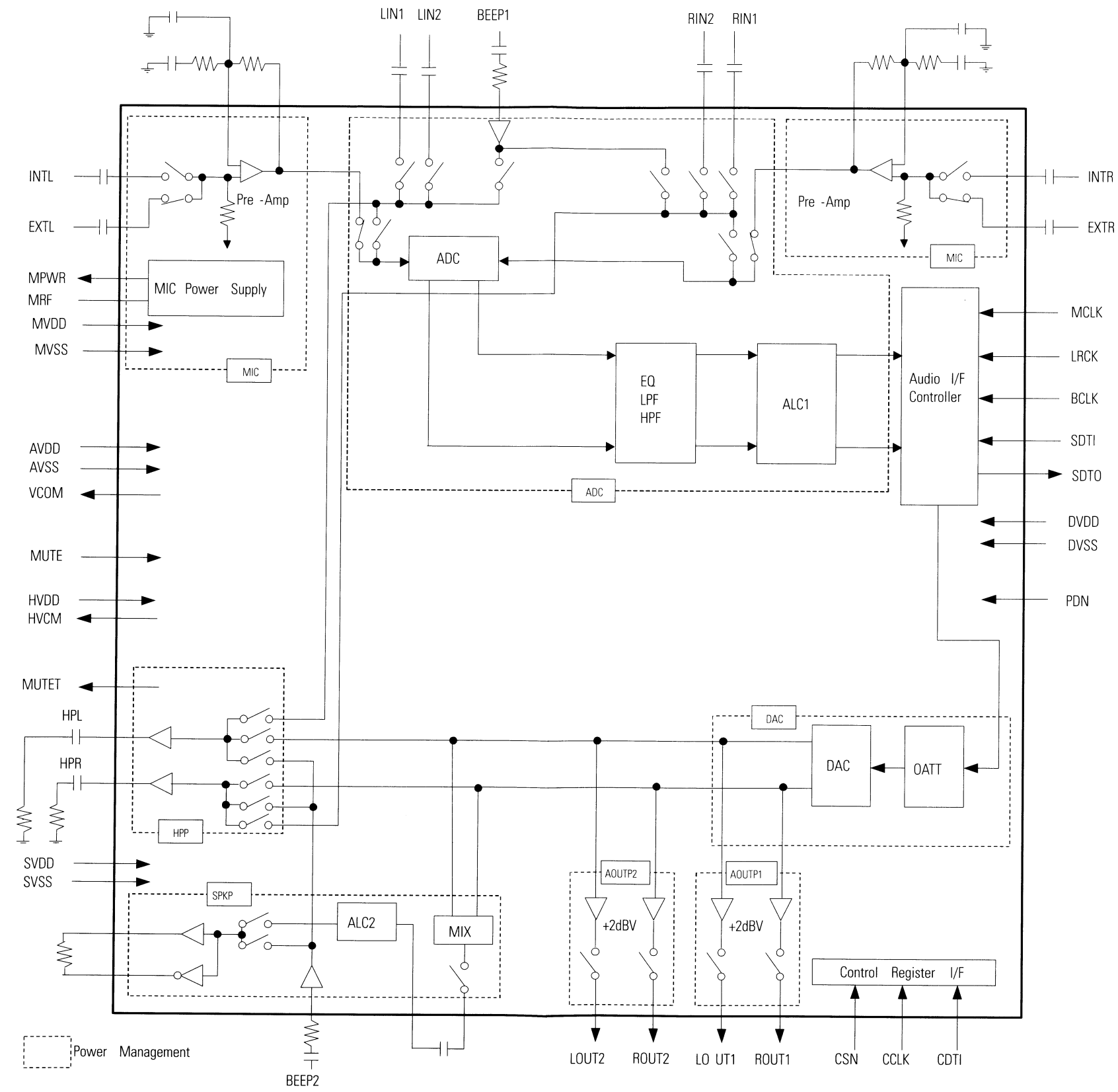
7-1 All Block Diagram



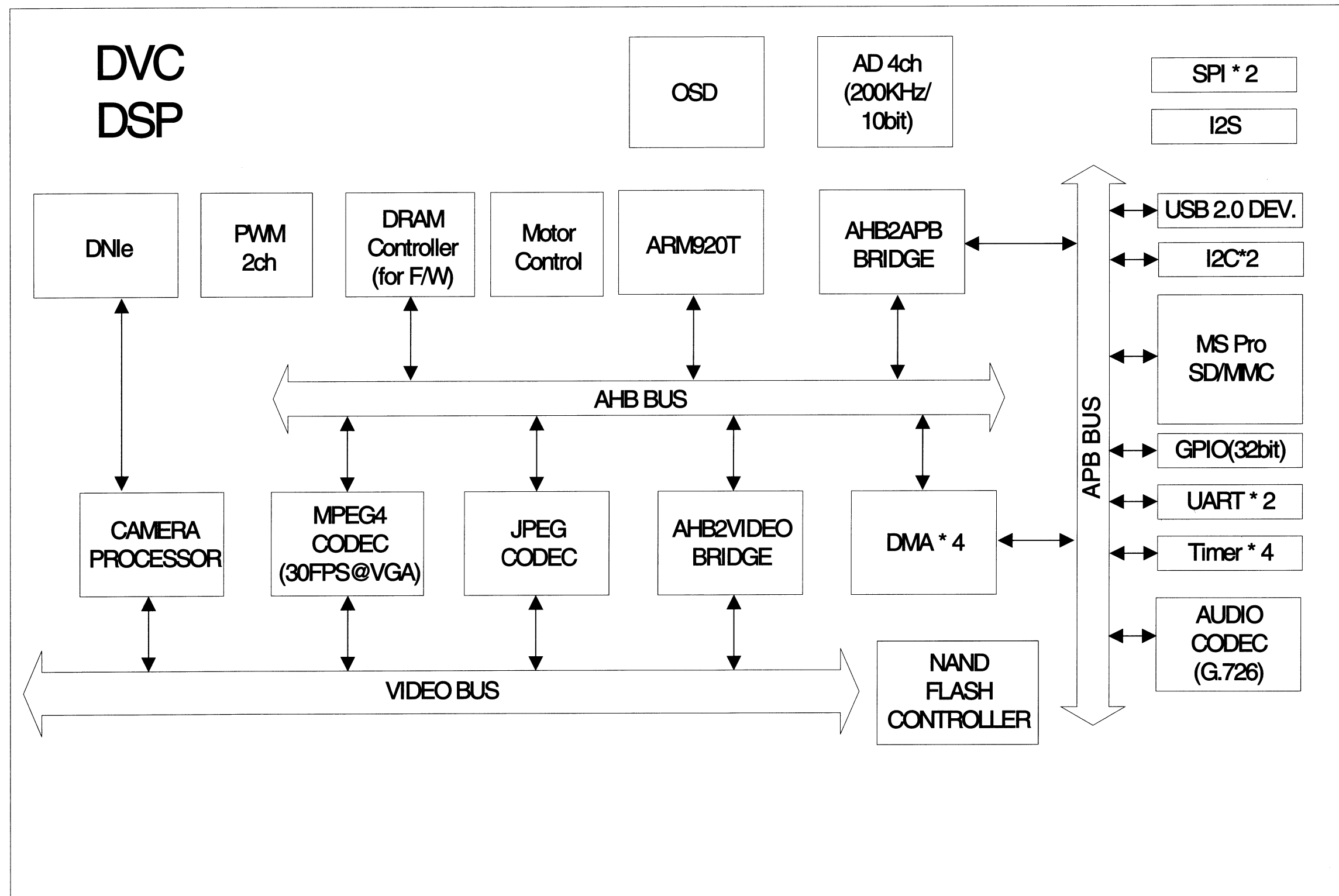
7-2 ICL01 IC Block Diagram



7-3 ICA01 IC Block Diagram

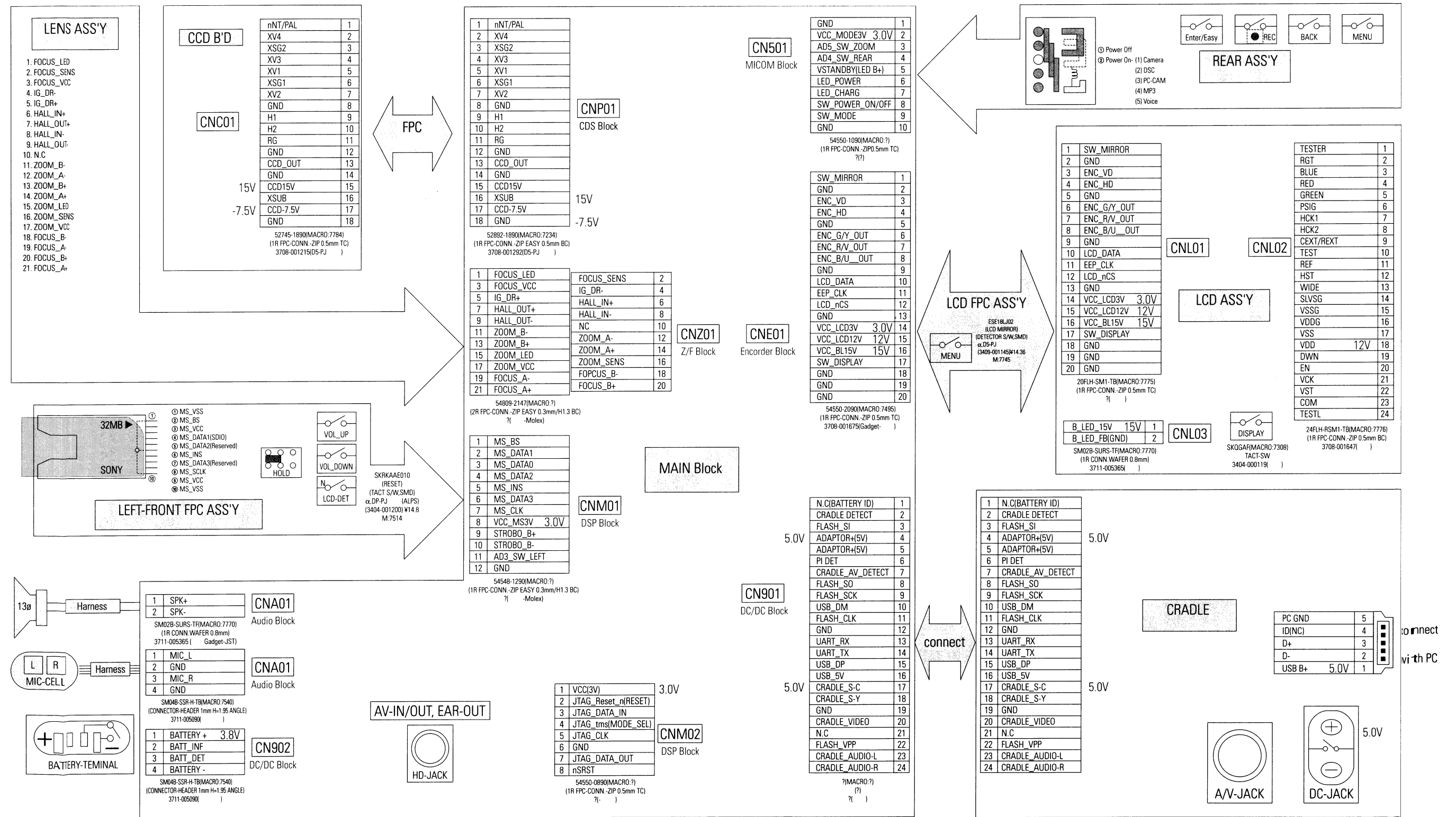


7-4 ICM01 IC Block Diagram



MEMO

8. Wiring Diagram



MEMO

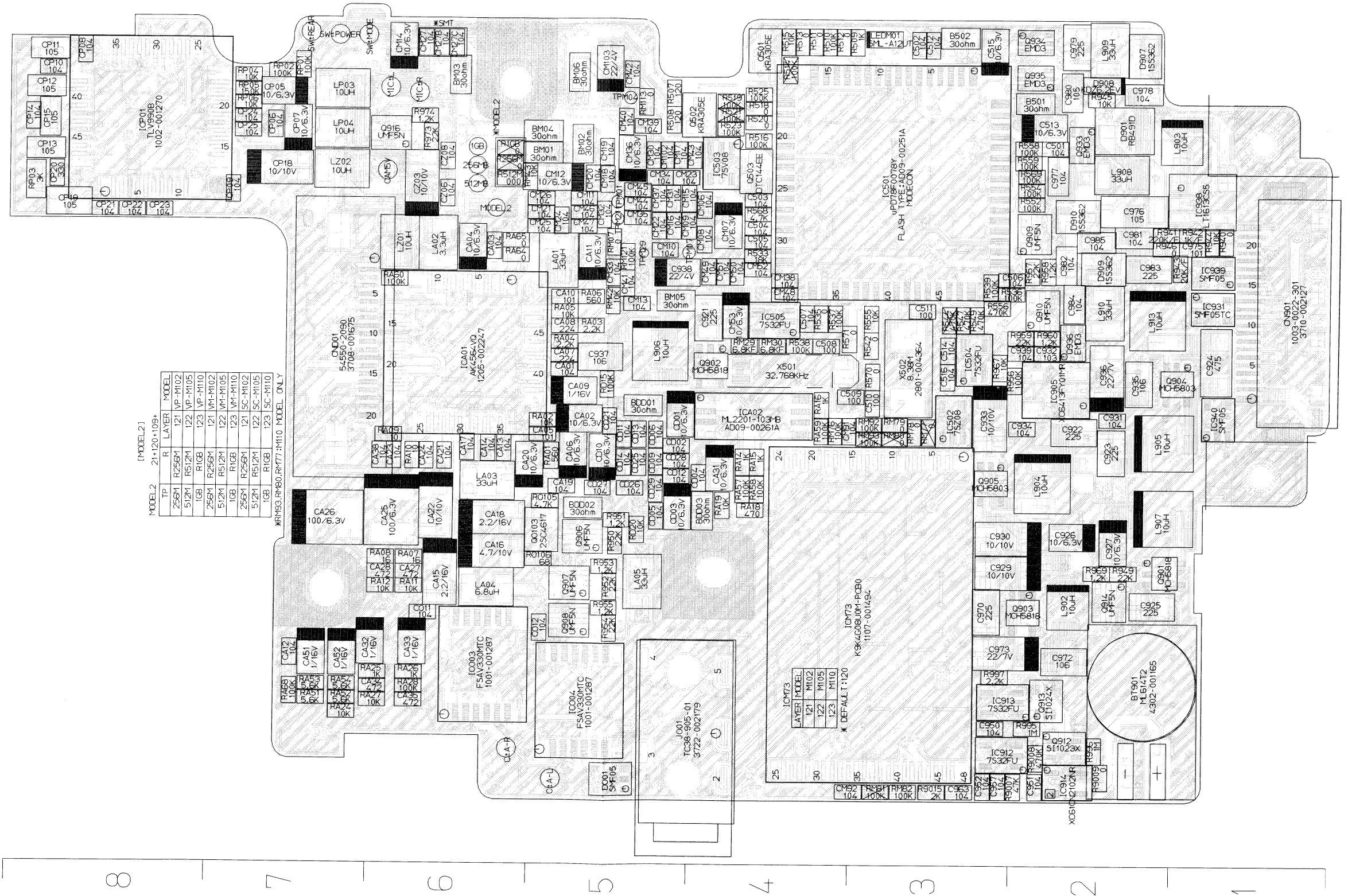
9. PCB Diagrams

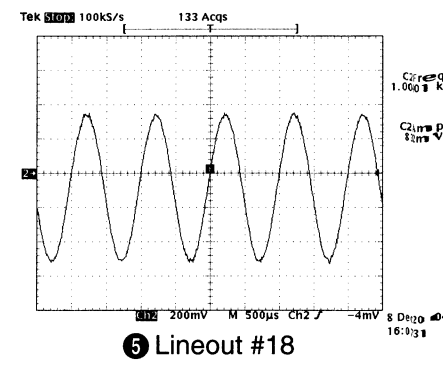
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9-1 Main PCB

COMPONENT SIDE

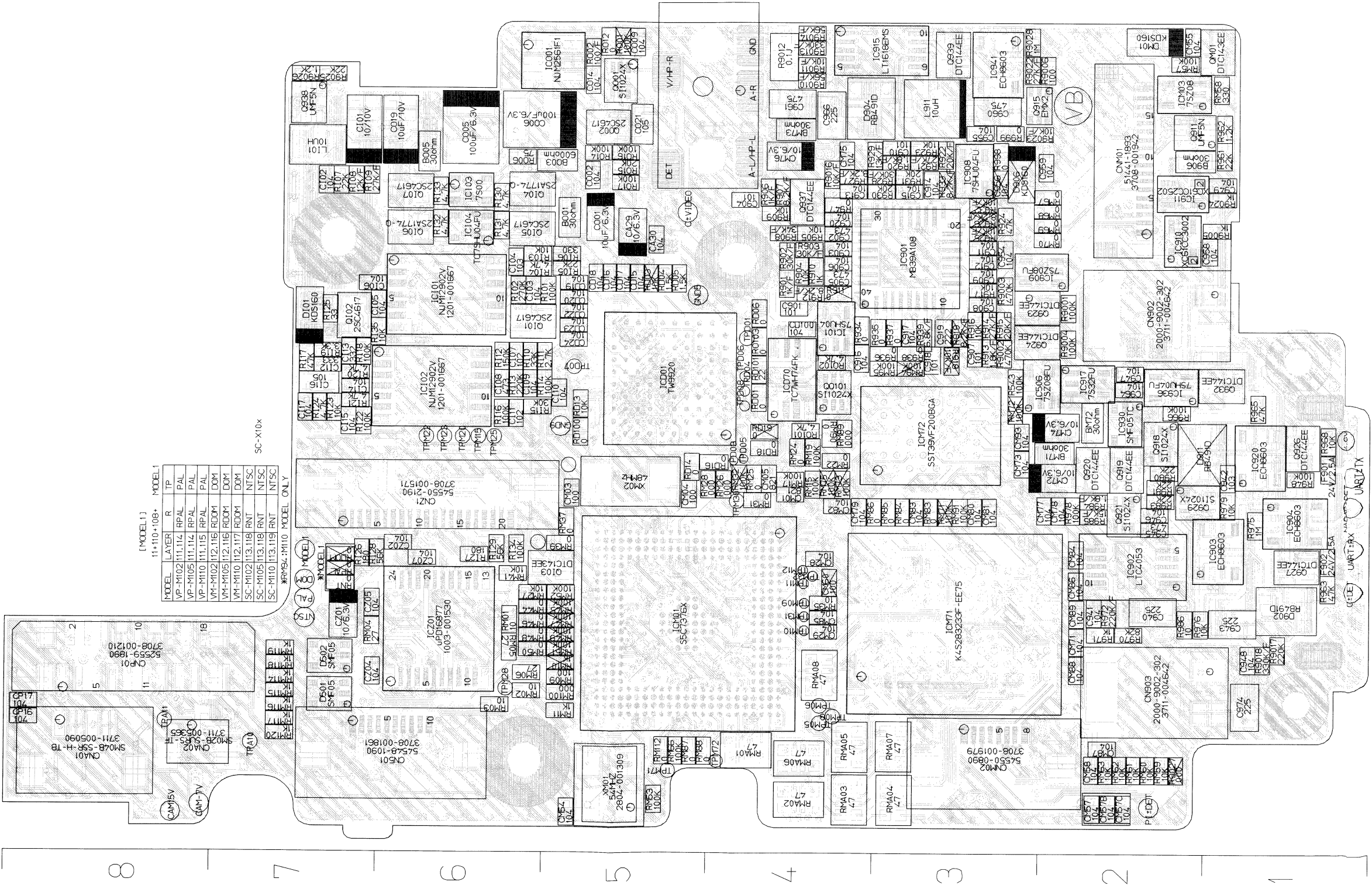
X, Y	LOC.NO
E-8	ICP01
C-6	ICA01
C-4	ICA02
C-4	IC505
D-3	IC501
C-2	IC905
D-1	IC938
A-6	IC003
A-5	IC004
B-3	ICM73
A-2	IC914
C-7	CND01
D-1	CN901
A-5	JO01
E-6	BM03
D-5	BM05
E-5	BM06
E-5	BM04
E-5	BM01
C-5	BDD01
E-3	B502
A-2	BT901
E-2	B501
B-5	BDD02
B-4	BDD03
E-7	LP03
E-7	LP04
D-7	LZ02
D-6	LZ01
D-6	LA02
E-2	L909
D-2	L908
D-2	L910
B-6	LA04
C-2	L913
C-2	L905
B-5	LA05
B-2	L904
B-2	L902
B-2	L907
C-6	LA03
C-5	L906
D-5	LA01
B-2	Q901
C-4	Q902
B-2	Q903
C-1	Q904
C-3	Q905

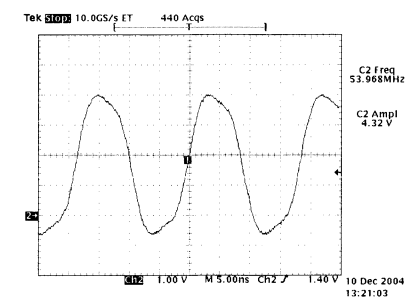
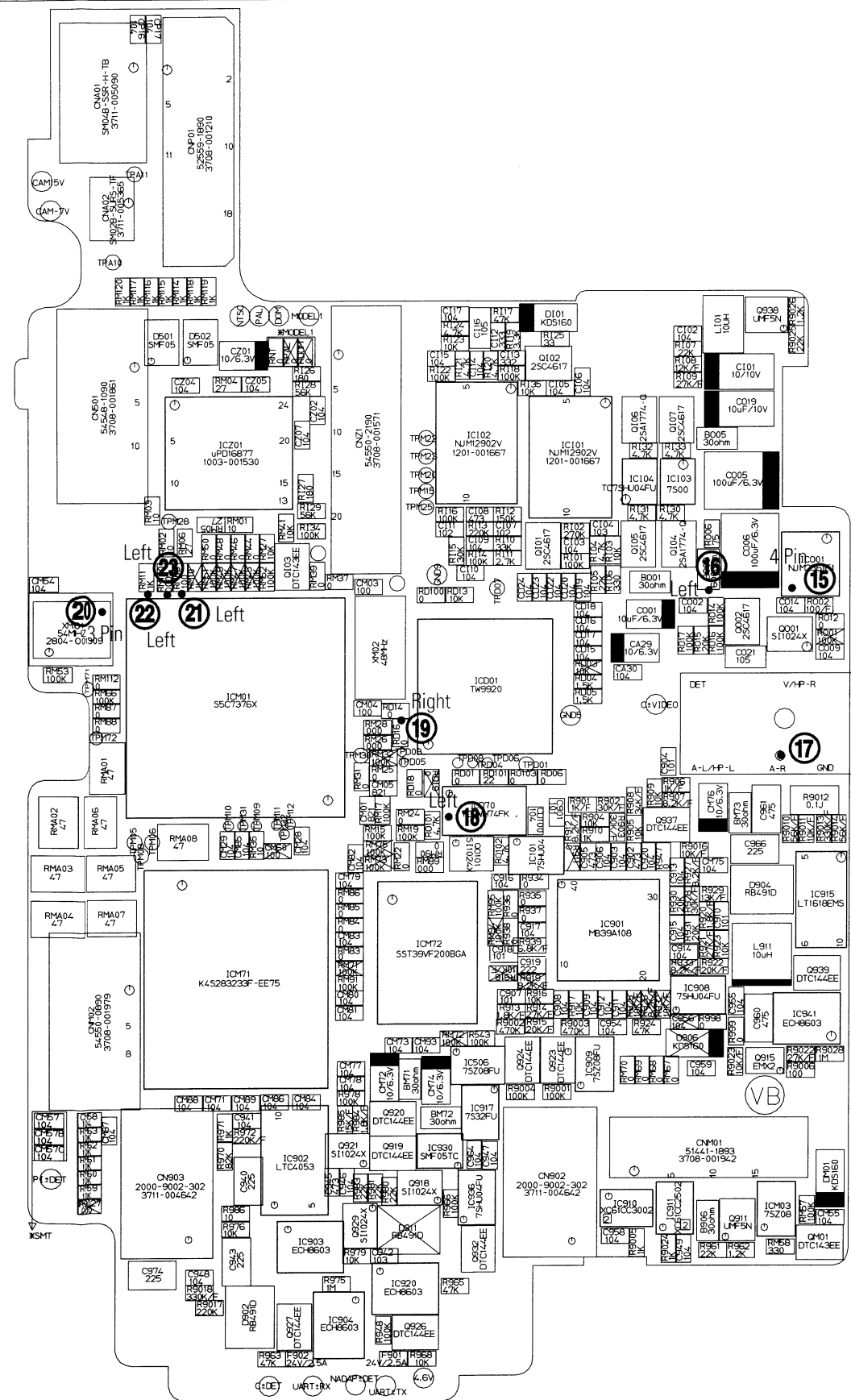




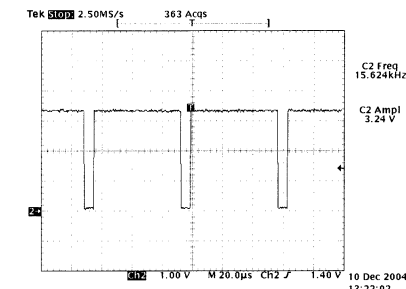
CONDUCTOR SIDE

LOC.NO	X. Y
IC901	D-3
IC902	B-2
IC903	B-1
IC904	B-1
IC915	E-3
IC920	C-1
IC941	E-3
ICD01	C-5
IC101	D-6
IC102	C-6
IC001	E-5
ICM01	B-5
ICM71	B-3
ICM72	C-3
ICZ01	B-6
CN501	A-7
CN902	D-2
CN903	A-2
CNA01	A-8
CNA02	A-8
CNM01	E-2
CNM02	A-3
CNP01	A-8
CN1	B-6
BM71	C-2
BM72	C-2
BM73	E-4
BO 01	D-5
BO 05	E-6
L911	E-3
LI 01	E-7

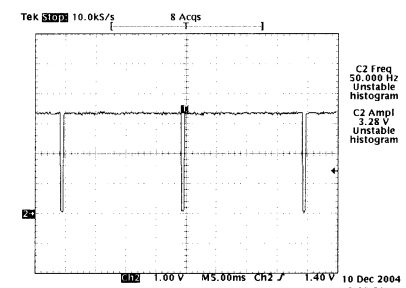




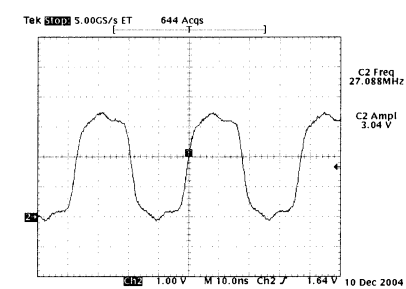
20 54MHz



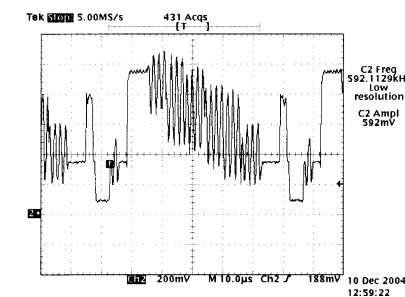
21 ENC_HD



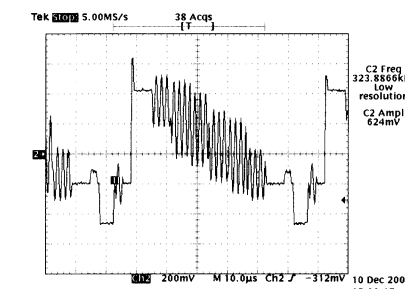
22 ENC_VD



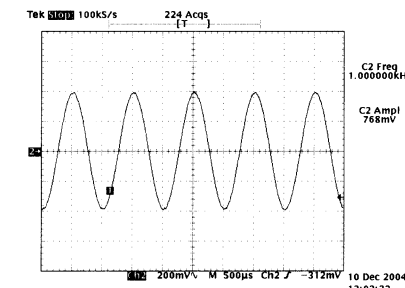
23 27MHz



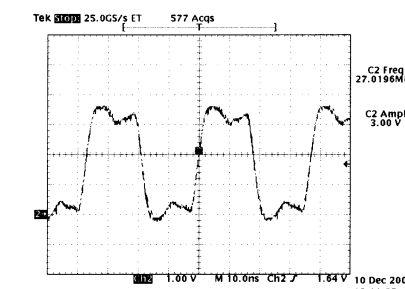
15 ENC_V_OUT



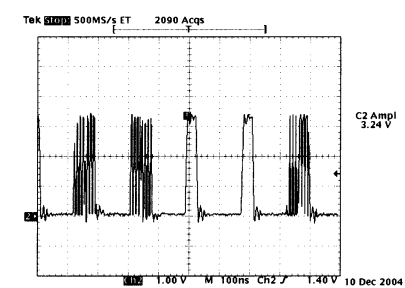
16 C_VIDEO



17 J_A-R



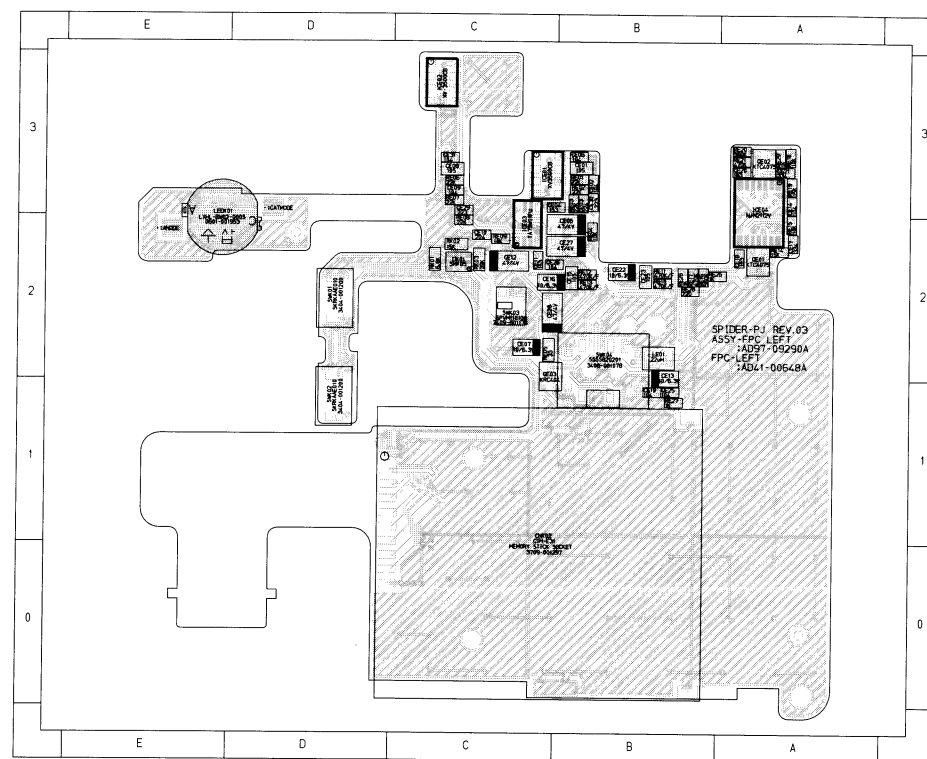
18 27MHz



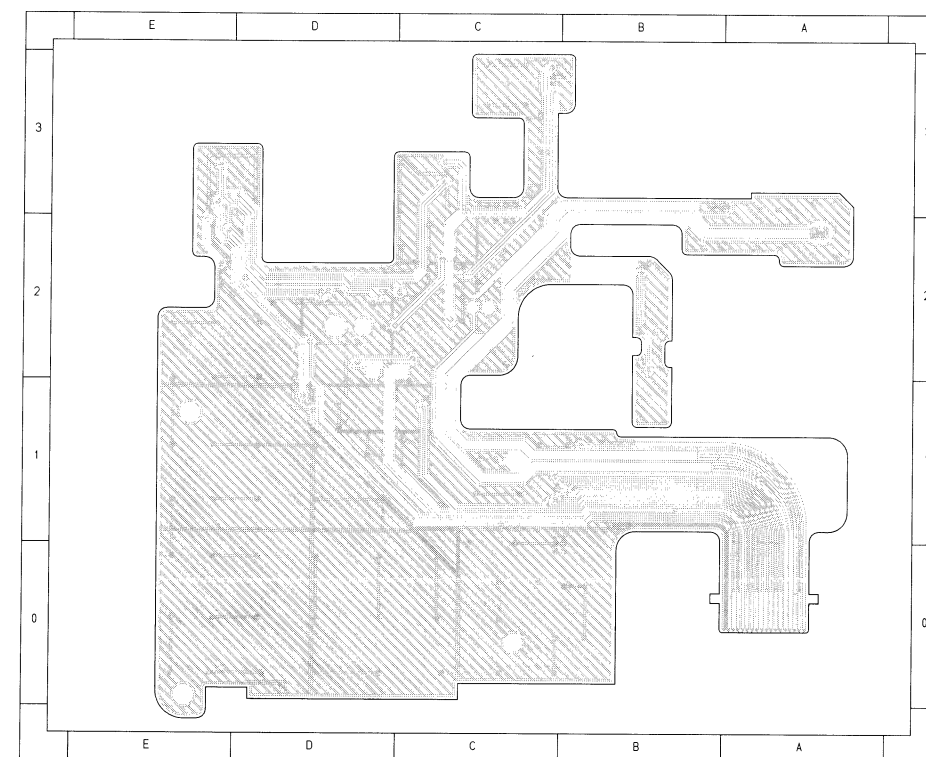
19 AMCLK

9-2 Left PCB

COMPONENT SIDE

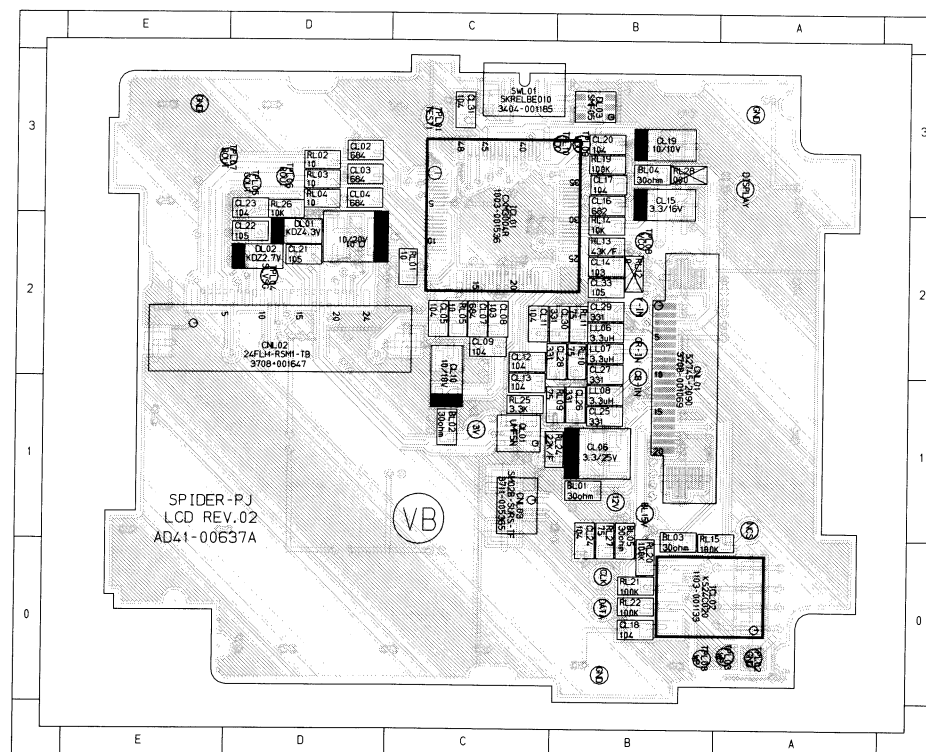


CONDUCTOR SIDE

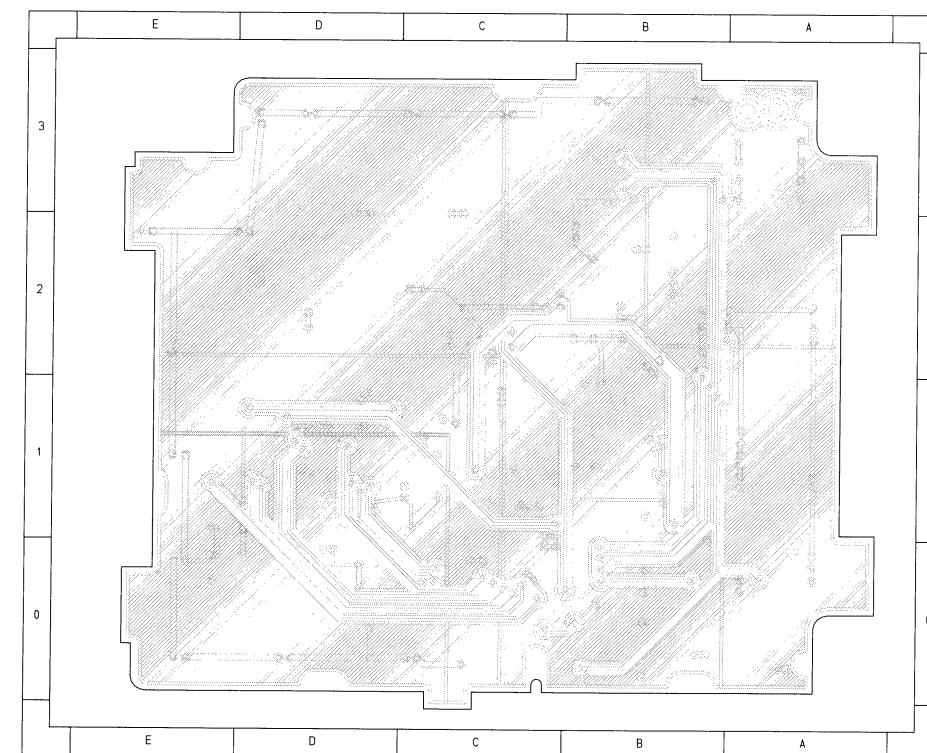


9-3 LCD PCB

COMPONENT SIDE

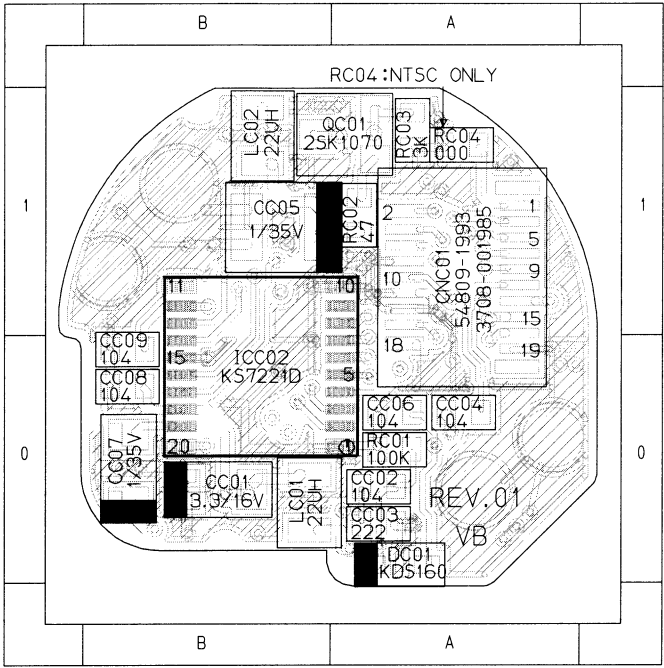


CONDUCTOR SIDE

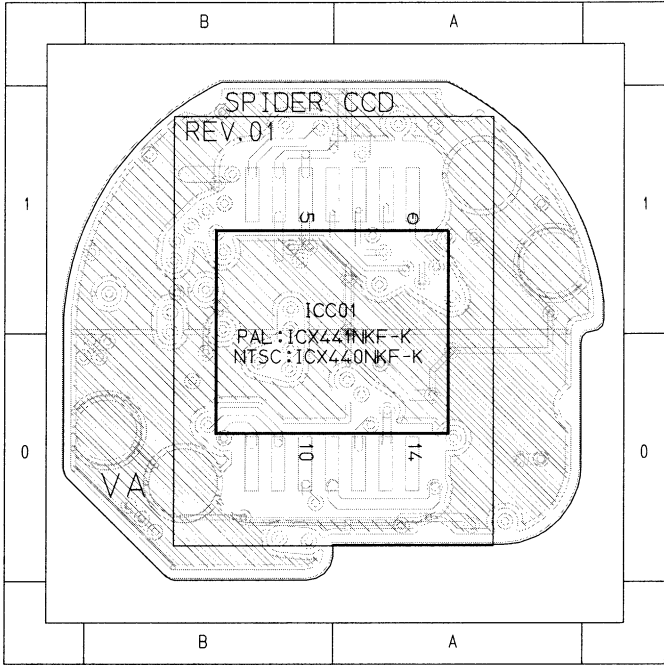


9-4 CCD PCB

COMPONENT SIDE



CONDUCTOR SIDE



MEMO

10. Schematic Diagrams

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10-2 DSP (Main PCB) - - - - -	10-3
10-3 Encoder (Main PCB) - - - - -	10-4
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10-5 Modecon (Main PCB) - - - - -	10-6
10-6 Audio (Main PCB)- - - - -	10-7
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10-11 Left 2 (Left PCB) - - - - -	10-12
10-12 LCD (LCD PCB) - - - - -	10-13
10-13 CCD (CCD PCB)- - - - -	10-14

Note

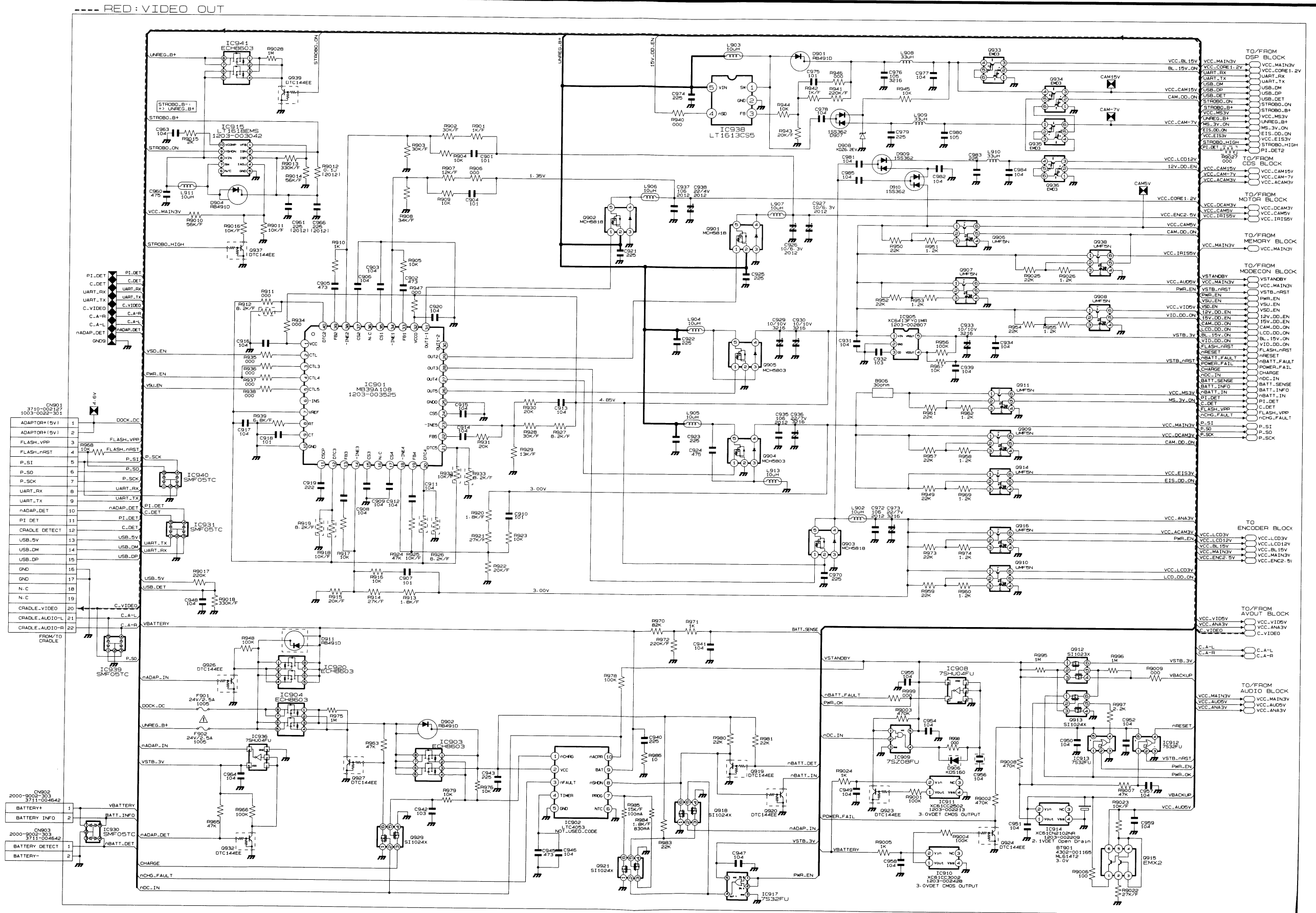
For schematic Diagram
- Resistors are in ohms, 1/8W unless otherwise noted.

Special note :
Most semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

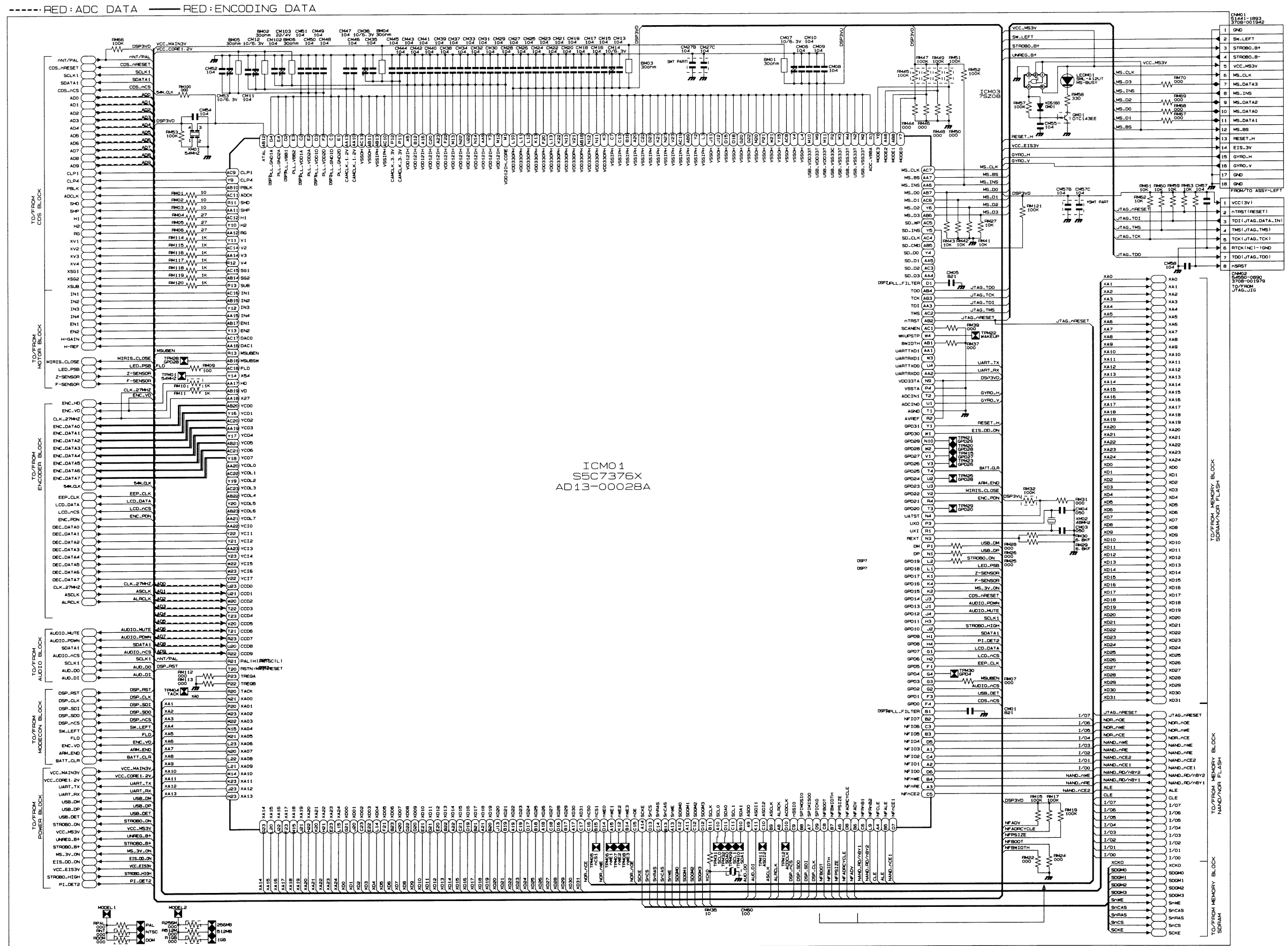
Note :
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list (may be slightly different or amended since this drawing was prepared).

Important safety notices :
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components Use only the same type.

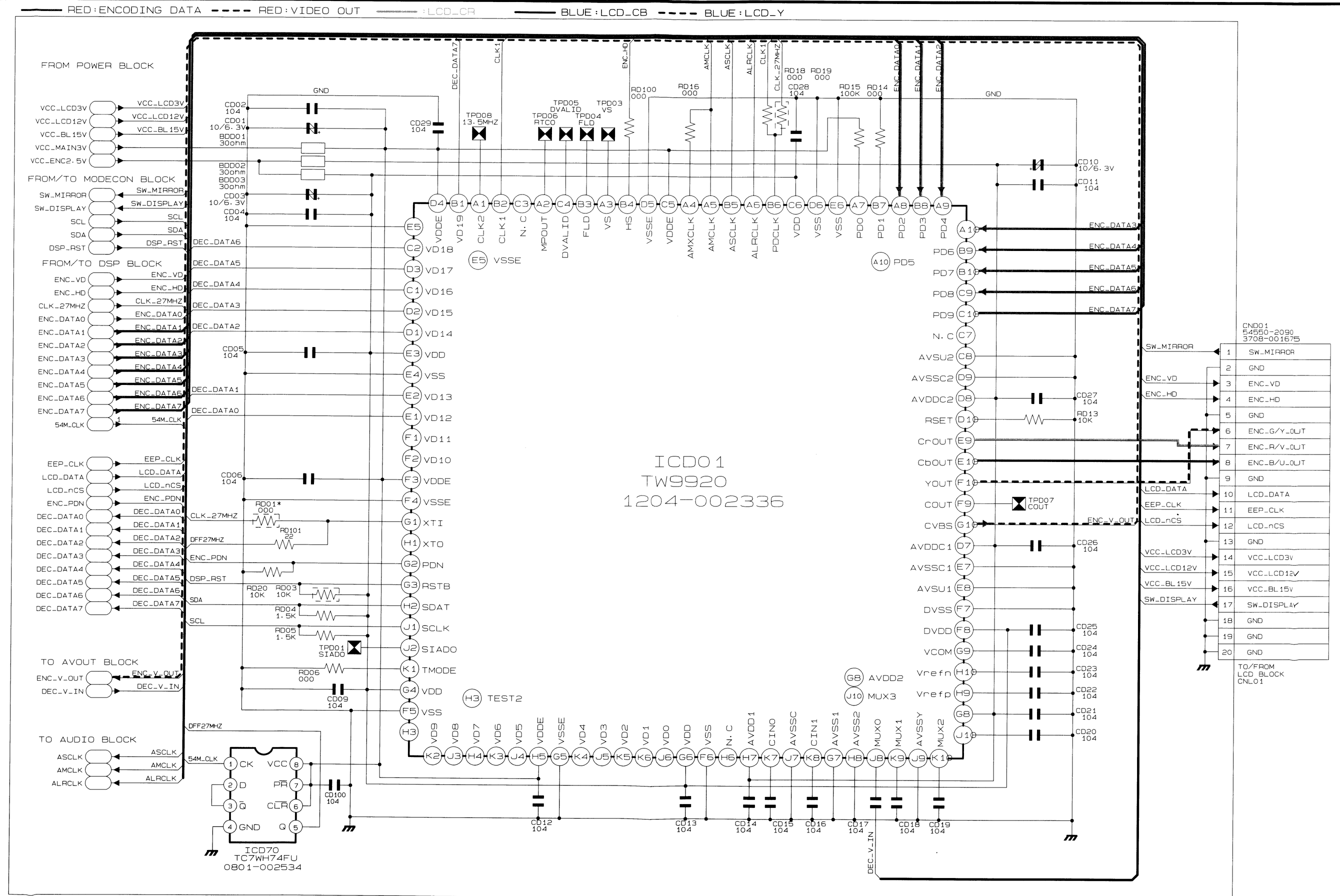
10-1 Power (Main PCB)



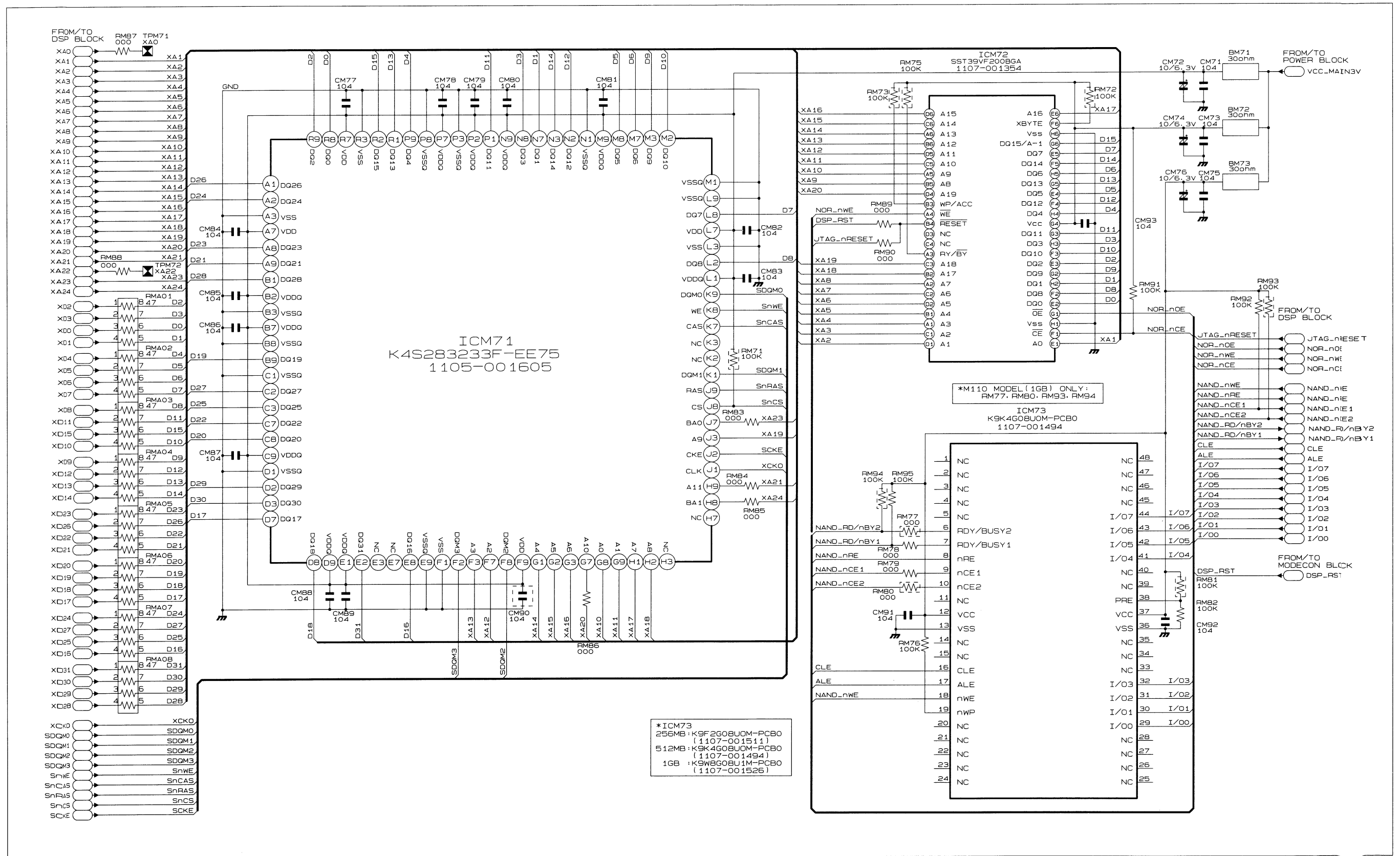
10-2 DSP (Main PCB)



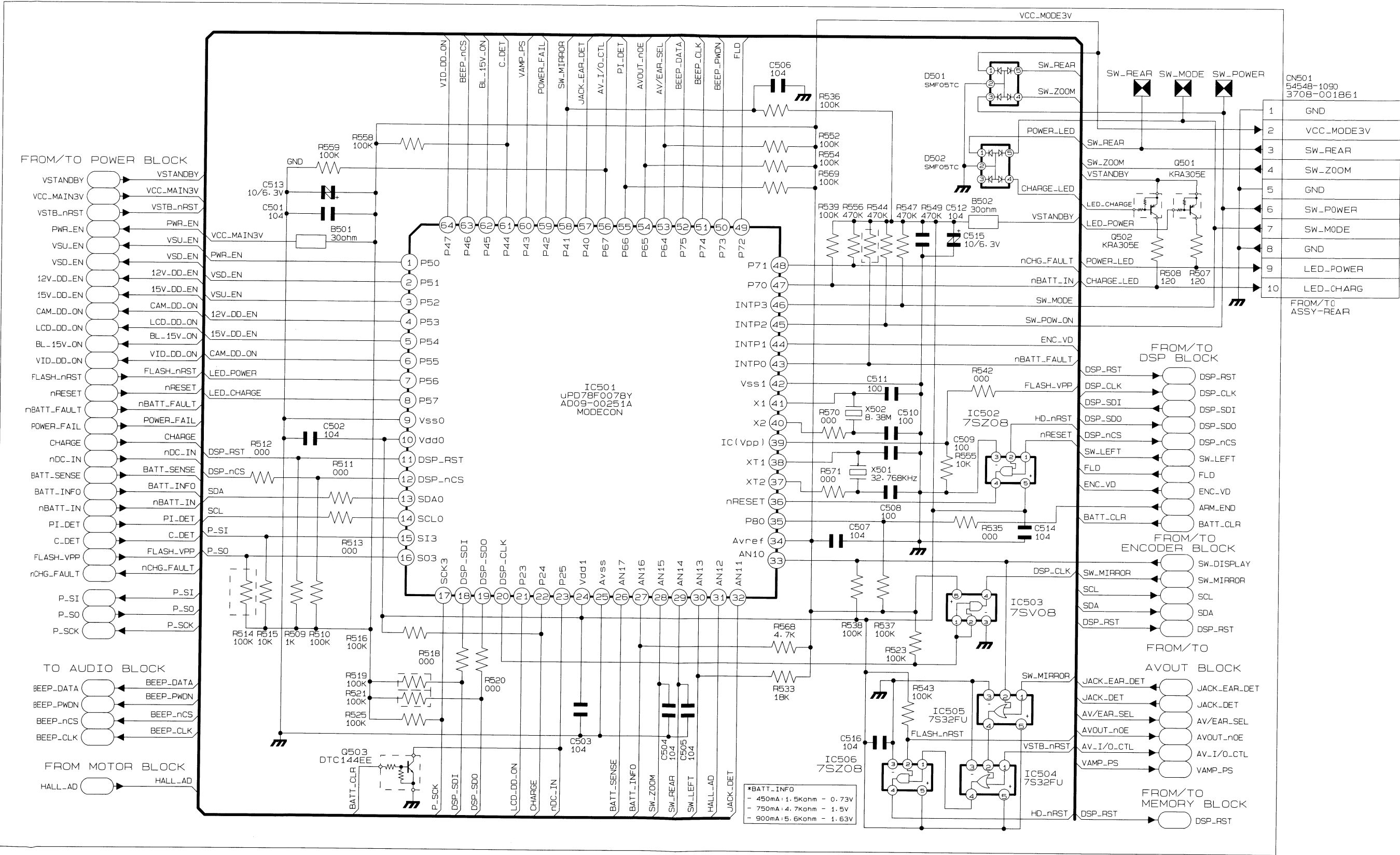
10-3 Encoder (Main PCB)



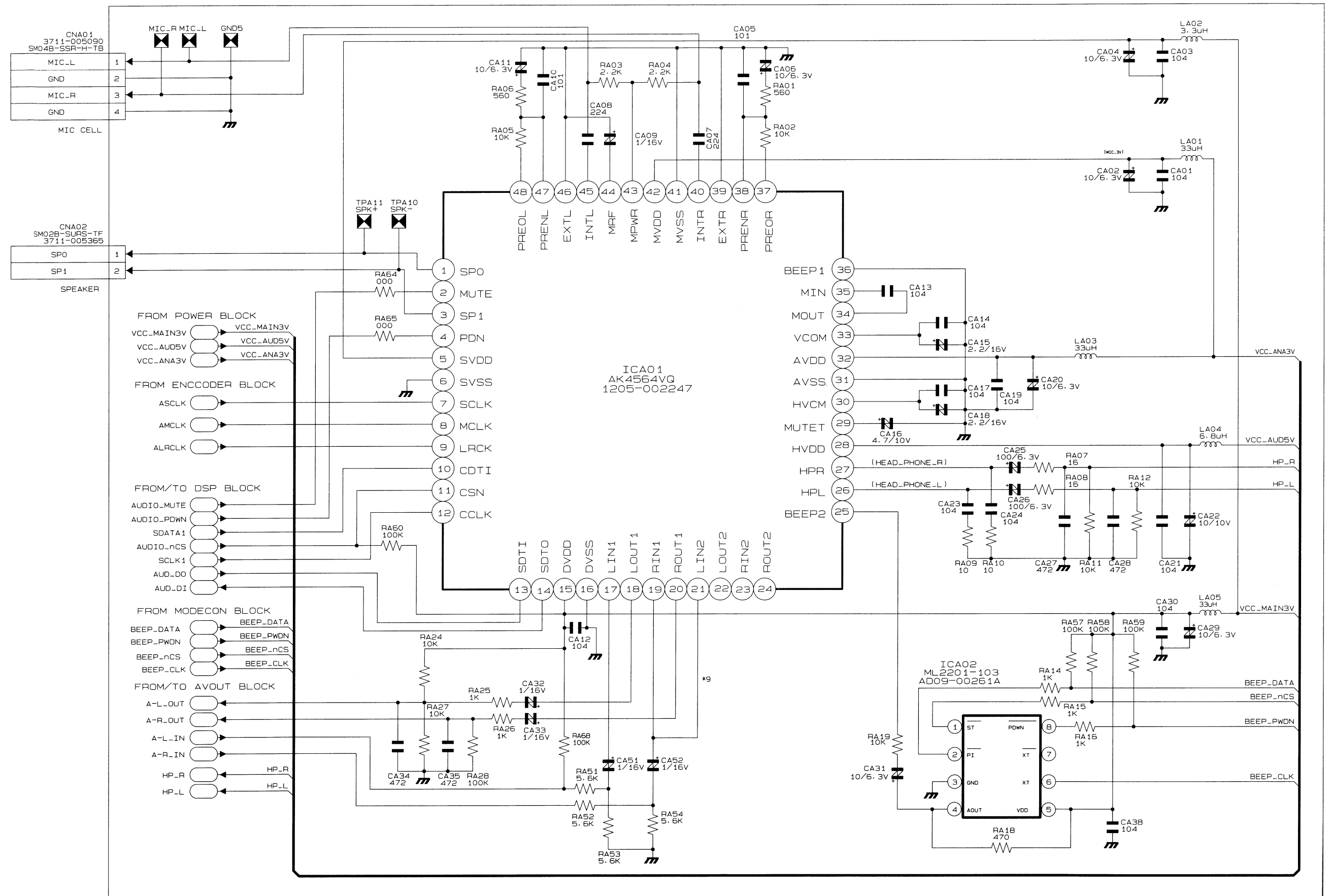
10-4 Memory (Main PCB)



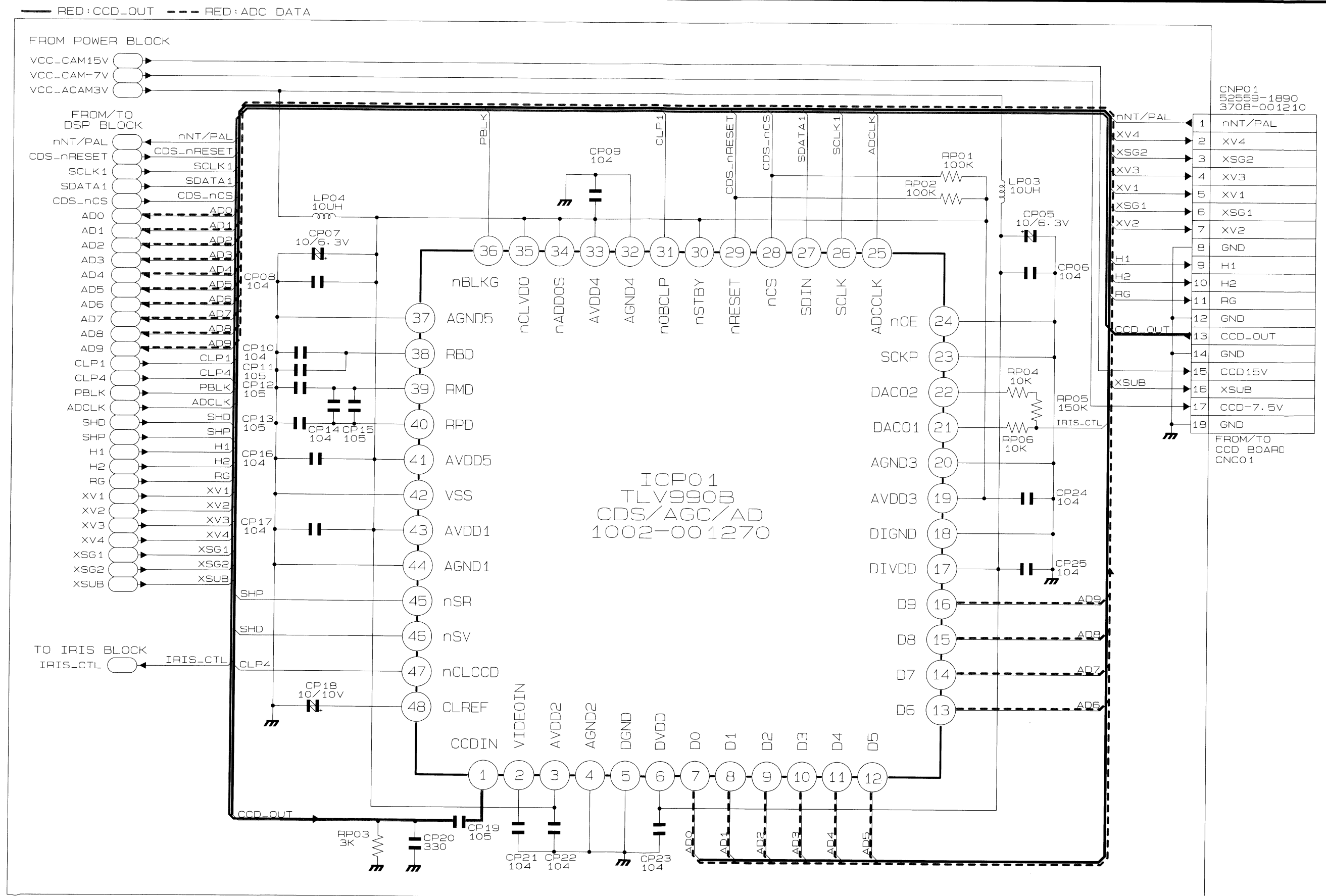
10-5 Modecon (Main PCB)



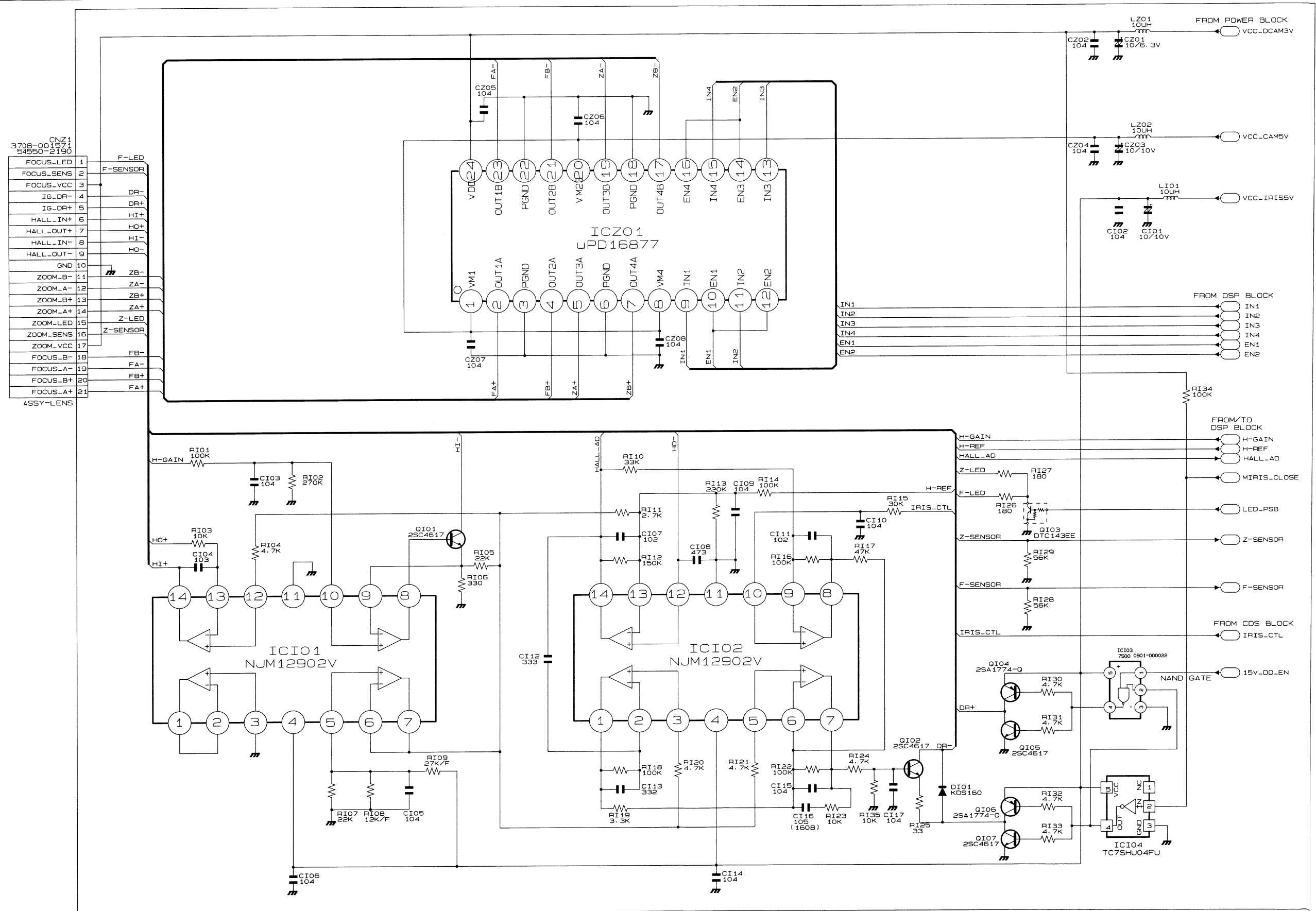
10-6 Audio (Main PCB)

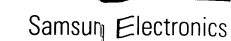


10-7 CDS (Main PCB)

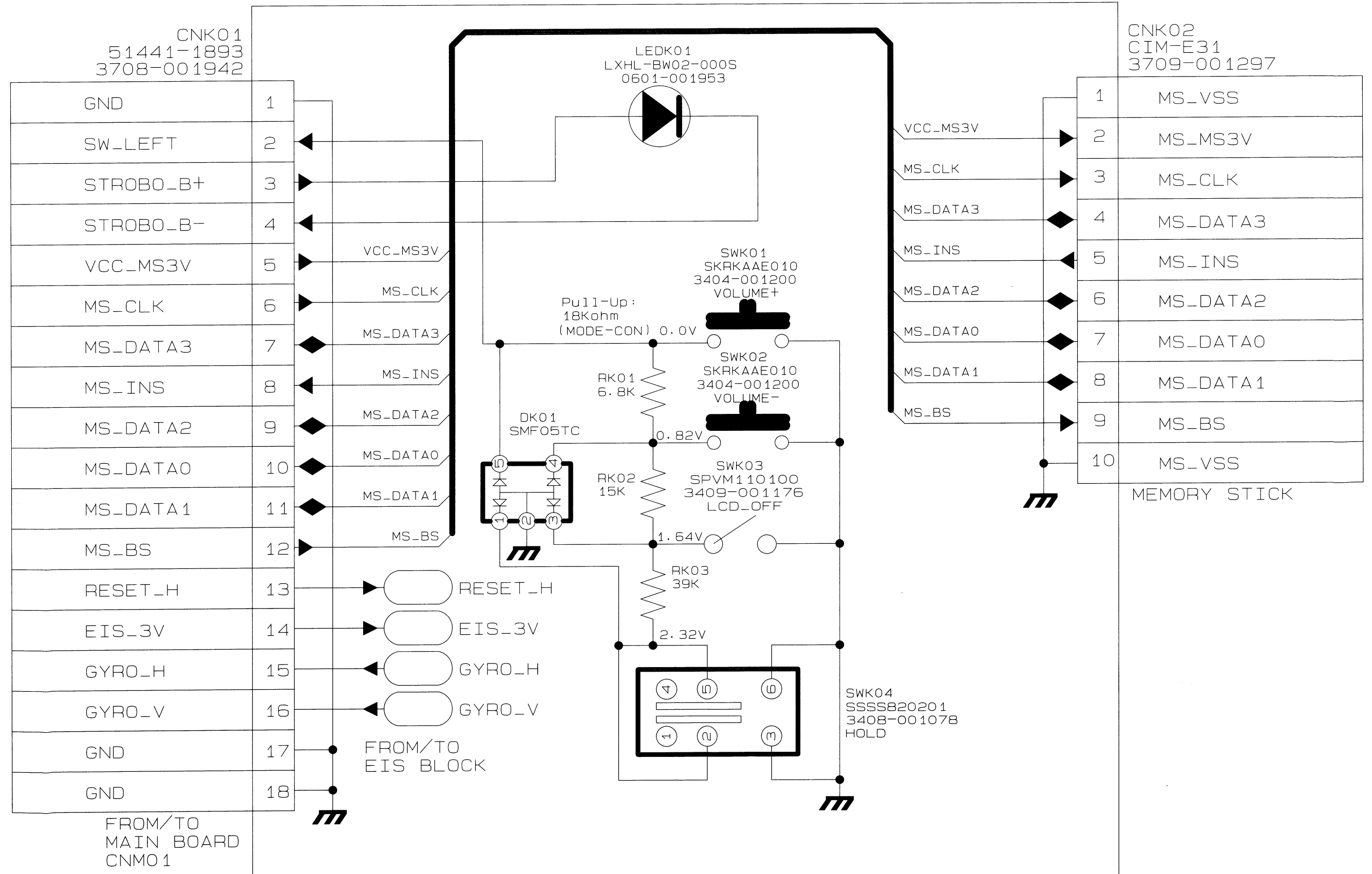


10-8 Motor (Main PCB)

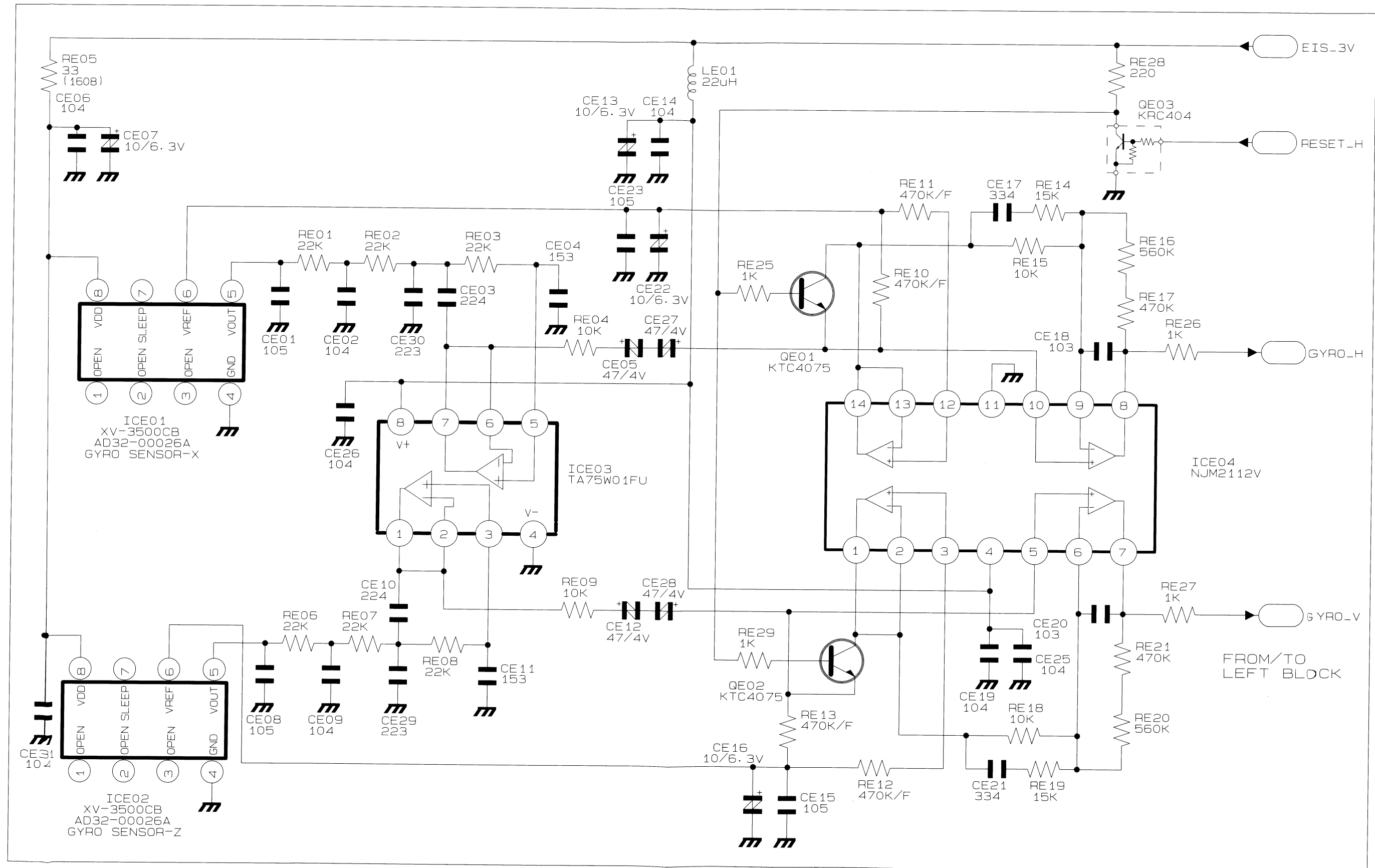




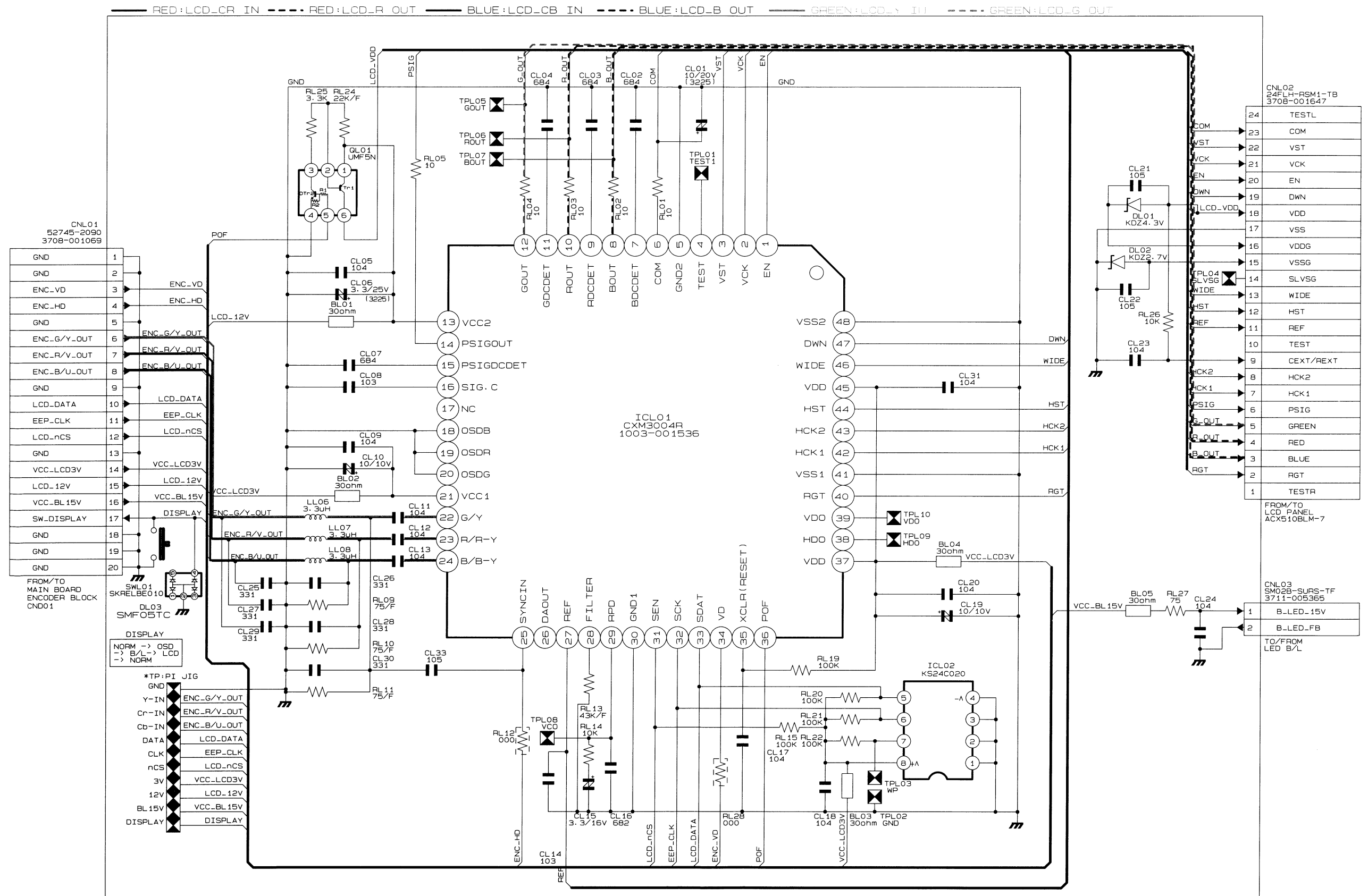
10-10 Left 1 (Left PCB)



10-11 Left 2 (Left PCB)



10-12 LCD (LCD PCB)



10-13 CCD (CCD PCB)

